

REPRO-HANDBUCH PROCESS LENS MANUAL

Rodagon/Apo-Rodagon

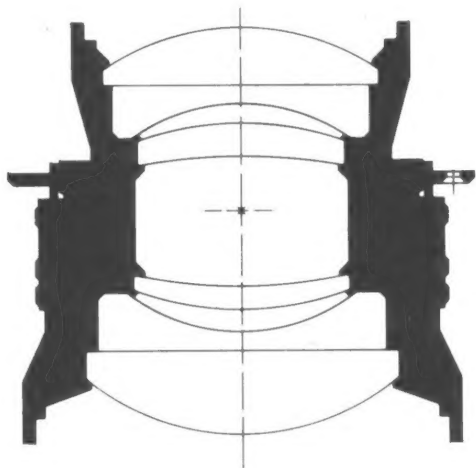
Das Rodagon ist ein Sechslinser, der in Reprovergrößerungsgeräten eingesetzt wird. Das optische System ist auf Maßstäbe optimiert, die von 1:1 abweichen. Die jeweiligen Maßstäbe sind aus der Zeichnung ersichtlich. Sie liegen zwischen 2,5 und 20fach. Das Rodagon wird mit Brennweiten zwischen 28 mm und 360 mm hergestellt, die Anfangsöffnungen liegen zwischen 1:2,8 und 1:6,8. Durch Abblenden um 2 bis 3 Stufen wird die beste Qualität erreicht.

Eine nochmalige Leistungssteigerung erreicht der Anwender mit dem Apo-Rodagon. Sehr gleichmäßige Bildqualität von der Mitte zum Rand, hervorragende Auflösung und höchster Kontrast kennzeichnen diese Baureihe, deren Brennweiten 50, 80 und 180 mm sind. Die Anfangsöffnungen liegen zwischen 2,8 und 4,8, die Maßstäbe zwischen 6 und 10fach.

Rodagon/Apo-Rodagon

The Rodagon is a six-element system used in process enlargers. The optical system is optimised for magnifications between 2.5 and 20 \times – i. e. no longer for 1:1 reproduction. The actual values are indicated on the data sheets. The Rodagon is produced in focal lengths from 28 mm to 360 mm and with maximum apertures between f/2.8 and f/6.8. Stopping down by 2 to 3 f-stops provides optimum quality.

The Apo-Rodagon yields higher performance still. This lens type is available in focal lengths of 50, 90 and 180 mm. Image definition is uniformly good from the centre to the edges, with outstanding resolution and optimum contrast. Maximum apertures range from f/2.8 to f/4.8, recommended magnifications from 6 \times to 10 \times .



Rodagon/Apo-Rodagon



REPRO-HANDBUCH PROCESS LENS MANUAL

Rodenstock Rodagon/Apo-Rodagon

Bestell-Nr.	Öffnungs- verhältnis	Nominal- brennweite	Effektiv- brennweite ± 0,5%	Empfohlene Formate		Max. Bild- winkel	Kleinste Blende
Order No.	Maximum aperture	Nominal focal length	Effective focal length ± 0.5%	Recommended copy formats		Max. angle of field	Smallest aperture
Rodagon							
270.0028.001.000	1:4,0	28	27,6	18×24 mm		60°	16
270.0035.001.000	1:4,0	35	35	24×24 mm		60°	16
270.0051.001.000	1:2,8	50	50,1	24×36 mm		46°	16
270.0050.001.000	1:4,0	50	50,1	24×36 mm		46°	16
270.0060.001.000	1:4,0	60	61,8	4×4 cm		52°	22
270.0081.001.000	1:4,0	80	81,0	6×7 cm	2¼"×2¾"	56°	22
270.0080.001.000	1:5,6	80	81,0	6×7 cm	2¼"×2¾"	56°	22
271.0105.001.000	1:5,6	105	106,4	6×9 cm	2¼"×3½"	52°	32
271.0135.001.000	1:5,6	135	135,7	9×12 cm	4"×5"	56°	32
271.0150.001.000	1:5,6	150	150,3	9×12 cm	4"×5"	52°	45
271.0180.001.000	1:5,6	180	182,5	13×18 cm	5"×7"	56°	45
271.0210.001.000	1:5,6	210	206,5	13×18 cm	5"×7"	52°	45
271.0240.001.000	1:5,6	240	237,9	18×24 cm	8"×10"	56°	45
271.0300.001.000	1:5,6	300	291,5	18×24 cm	8"×10"	56°	45
271.0360.001.000	1:6,3	360	347,3	24×30 cm	10"×12"	56°	45
Apo-Rodagon							
275.0050.001.000	1:2,8	50	50,2	24×36 mm		46°	16
275.0080.001.000	1:4,0	80	82,6	6×7 cm	2½"×2¾"	56°	22
275.0180.001.000	1:4,8	180	180,3	9×12 cm	4"×5"	46°	32

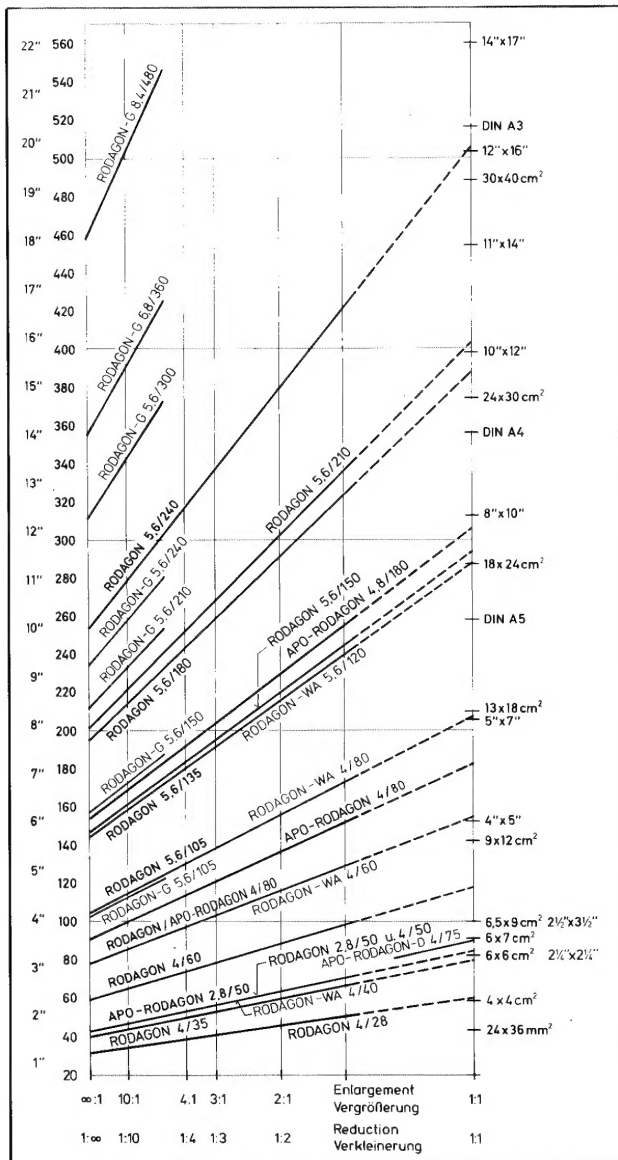
REPRO-HANDBUCH PROCESS LENS MANUAL

Zusammenhänge zwischen Format, Maßstab und Brennweite

Die erforderliche Brennweite ist bei bekanntem Maßstab und verschiedenen Formaten bzw. Format-diagonalen aus diesen Grafiken ablesbar.

(Bei Vergrößerungen: Vorlagenformat, bei Verkleinerungen: Bildformat)

**Rodagon/Apo-Rodagon, max. 240 mm
(Rodagon-WA/APO-Rodagon-D/Rodagon-G)***



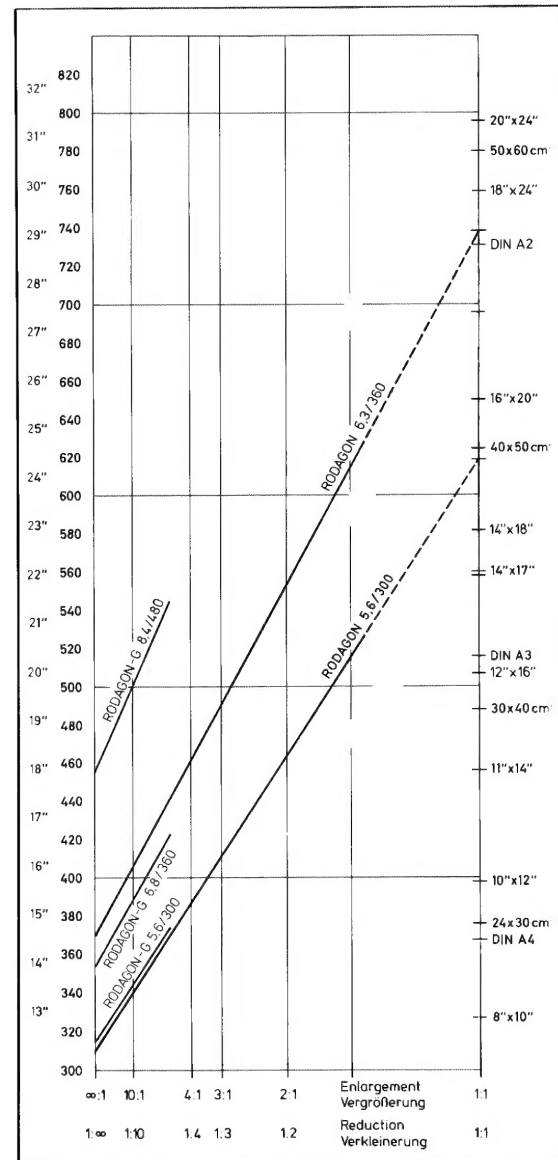
* als Zusatzinformation
* additional information

Image format, scale and focal length relationships

These diagrams show the focal length required to reproduce different formats or format diagonals at a given scale of reproduction.

(Refers to copy format for magnifications, to image format for reductions)

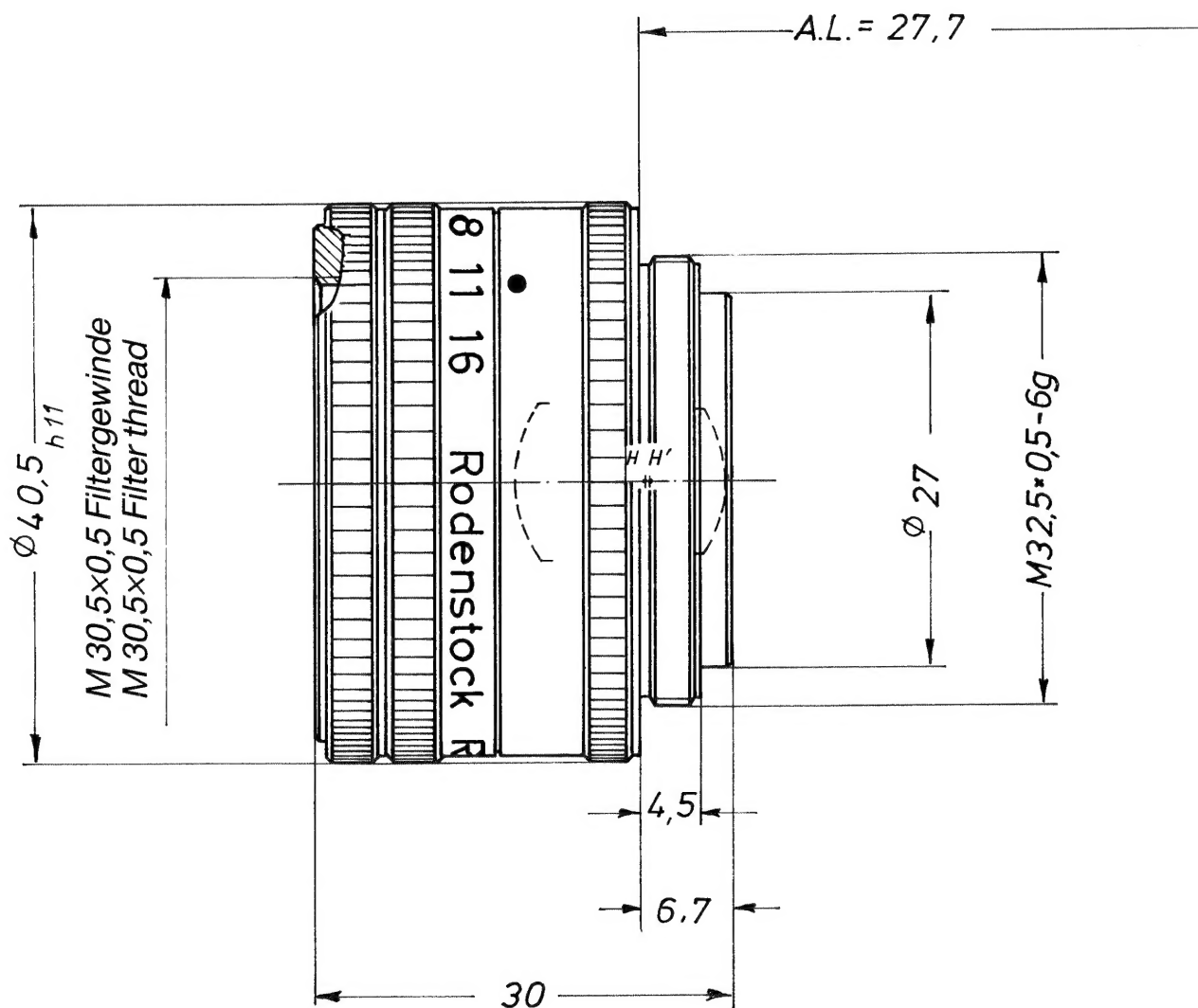
**Rodagon, min. 300 mm
(Rodagon-G)***



* als Zusatzinformation
* additional information

REPRO-HANDBUCH PROCESS LENS MANUAL

Rodagon 1:4 f = 28 mm



Bestell-Nr.	270.0028.001.000
Zeichnungsnummer	0701.221/3134.3
Optik-Nr.	7495-166
Zubehör	1 Schutzkappe 1 Konterring 1 Zwischenring 1002.04-7 für M39×26 Gg./"
optimaler Abbildungsmaßstab $\beta'_{\text{opt.}}$	-20
effektive Brennweite f'	27,6
Schnittweite s'_F	21,3
Hauptpunkt Abstand HH'	0,04
Bildwinkel $2w$	60°

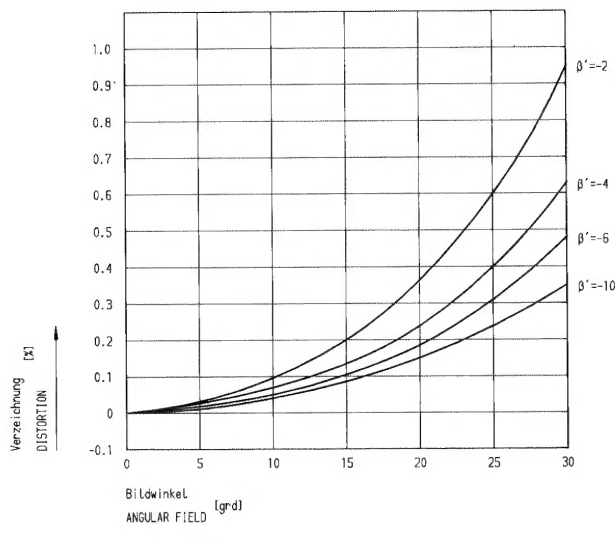
Alle nicht bezeichneten Maße sind Millimeterangaben

Order No.	270.0028.001.000
Drawing No.	0701.221/3134.3
Lens No.	7495-166
Accessories	1 lens cap 1 locking ring 1 adapter ring 1002.04-7 for M39×26 tpi screw mount
Optimum scale $\beta'_{\text{opt.}}$	-20
Effective focal length f'	27.6 mm
Rear focus s'_F	21.3 mm
Separation of nodal points HH'	0.04 mm
Angle of field $2w$	60°

All sizes not otherwise indicated are in mm

REPRO-HANDBUCH PROCESS LENS MANUAL

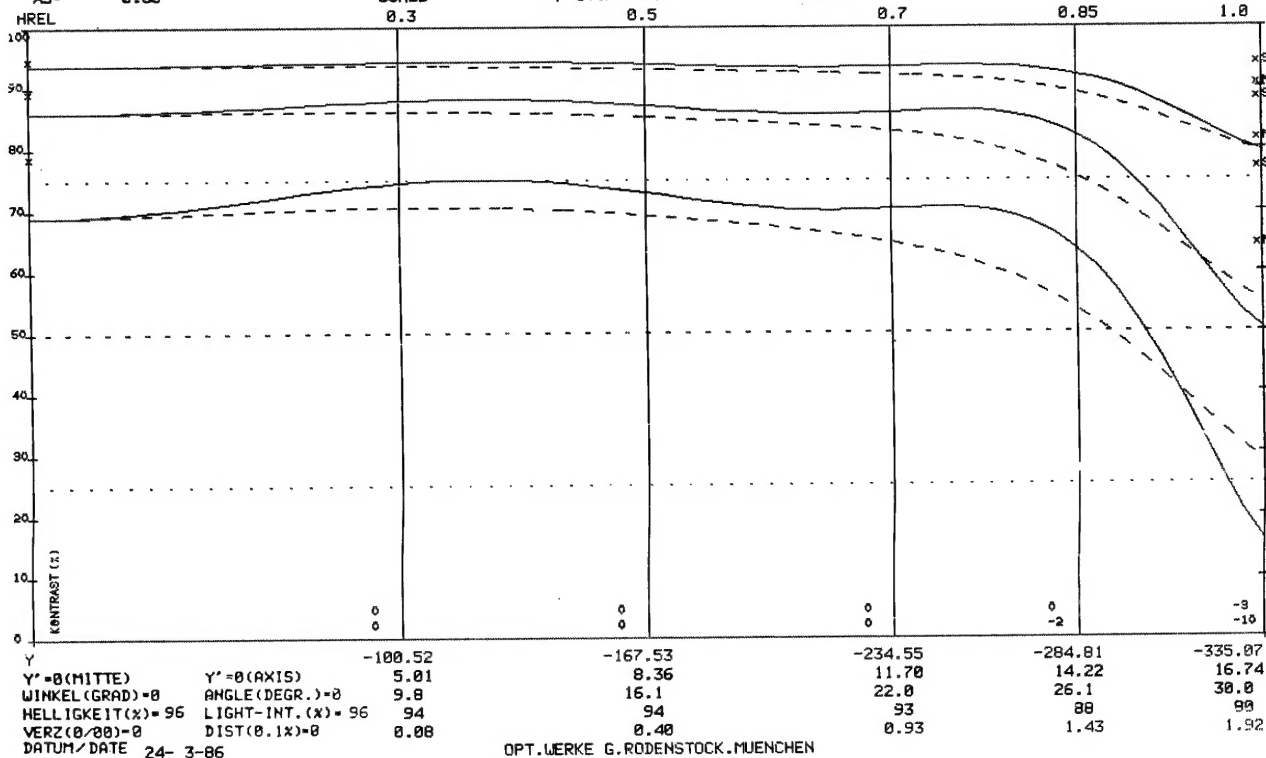
Rodagon 1:4 f = 28 mm



MTF (BEUG.OPT.) UEBER BILDFELD
MTF (DIFFRACT.) OVER IMAGE FIELD

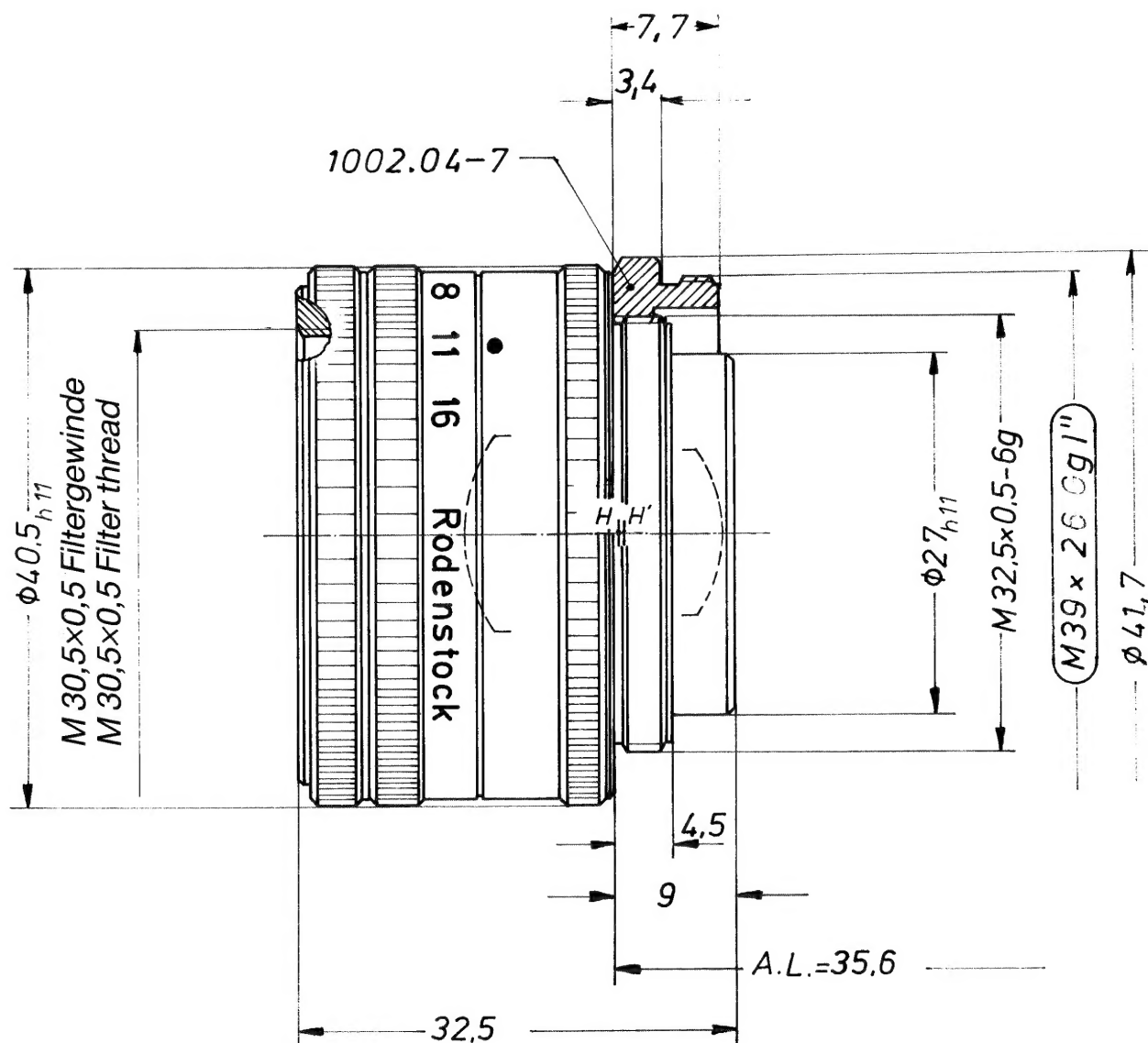
ED = -0.090 PA25(T) LAM 378.0 444.0 510.0 576.0 642.0
PERED = VLAM BEW 50.0 95.0 89.0 54.0 21.0 30.0 100.0 13.0 54.0
ORTSFREQUENZ: 10. 20. 40 1/MM
SPATIAL FREQ:
(X=BEUG.THEOR.WERT)
(X=DIFFR.LIM.VAL.)
XS = 0.00 BETA' = -0.050 BLENDENDURCHM = 2.55 BLENDENZ=1: 0.0
SCALE F-STOP DIAM. F-NUMB

AN 0
ON 7495 - 156
8.0/ 27.6



REPRO-HANDBUCH PROCESS LENS MANUAL

Rodagon 1:4 f = 35 mm



Bestell-Nr.	270.0035.001.000
Zeichnungsnummer	0701.216/2005.4
Optik-Nr.	7404-017
Zubehör	1 Schutzkappe 1 Konterring 1 Zwischenring f. M39×26 Gg./"
optimaler Abbildungsmaßstab $\beta'_{\text{opt.}}$	-20
effektive Brennweite f'	35
Schnittweite s'_F	27,6
Hauptpunktstand HH'	0,11
Bildwinkel 2 w	60°

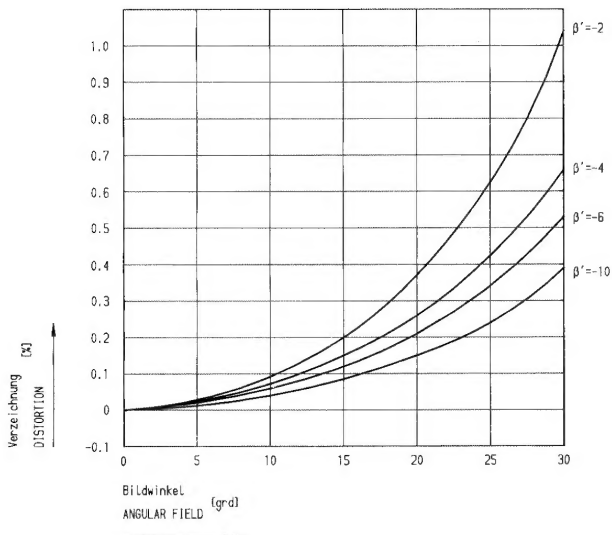
Alle nicht bezeichneten Maße sind Millimeterangaben

Order No.	270.0035.001.000
Drawing No.	0701.216/2005.4
Lens No.	7404-017
Accessories	1 lens cap 1 locking ring 1 adapter ring for M39×26 tpi screw mount
Optimum scale $\beta'_{\text{opt.}}$	-20
Effective focal length f'	35 mm
Rear focus s'_F	27.6 mm
Separation of nodal points HH'	0.11 mm
Angle of field 2 w	60°

All sizes not otherwise indicated are in mm

REPRO-HANDBUCH PROCESS LENS MANUAL

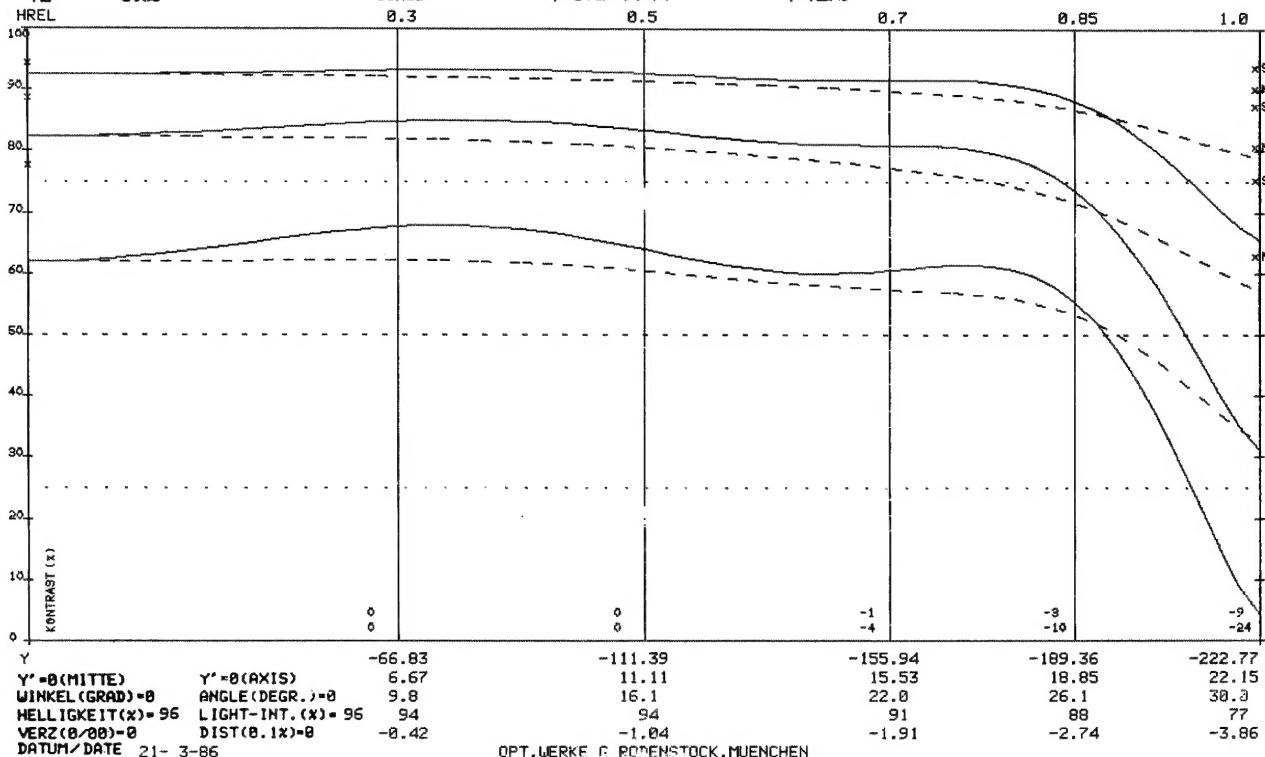
Rodagon 1:4 f = 35 mm



MTF (BEUG.OPT.) UEBER BILDFELD
MTF (DIFFRACT.) OVER IMAGE FIELD

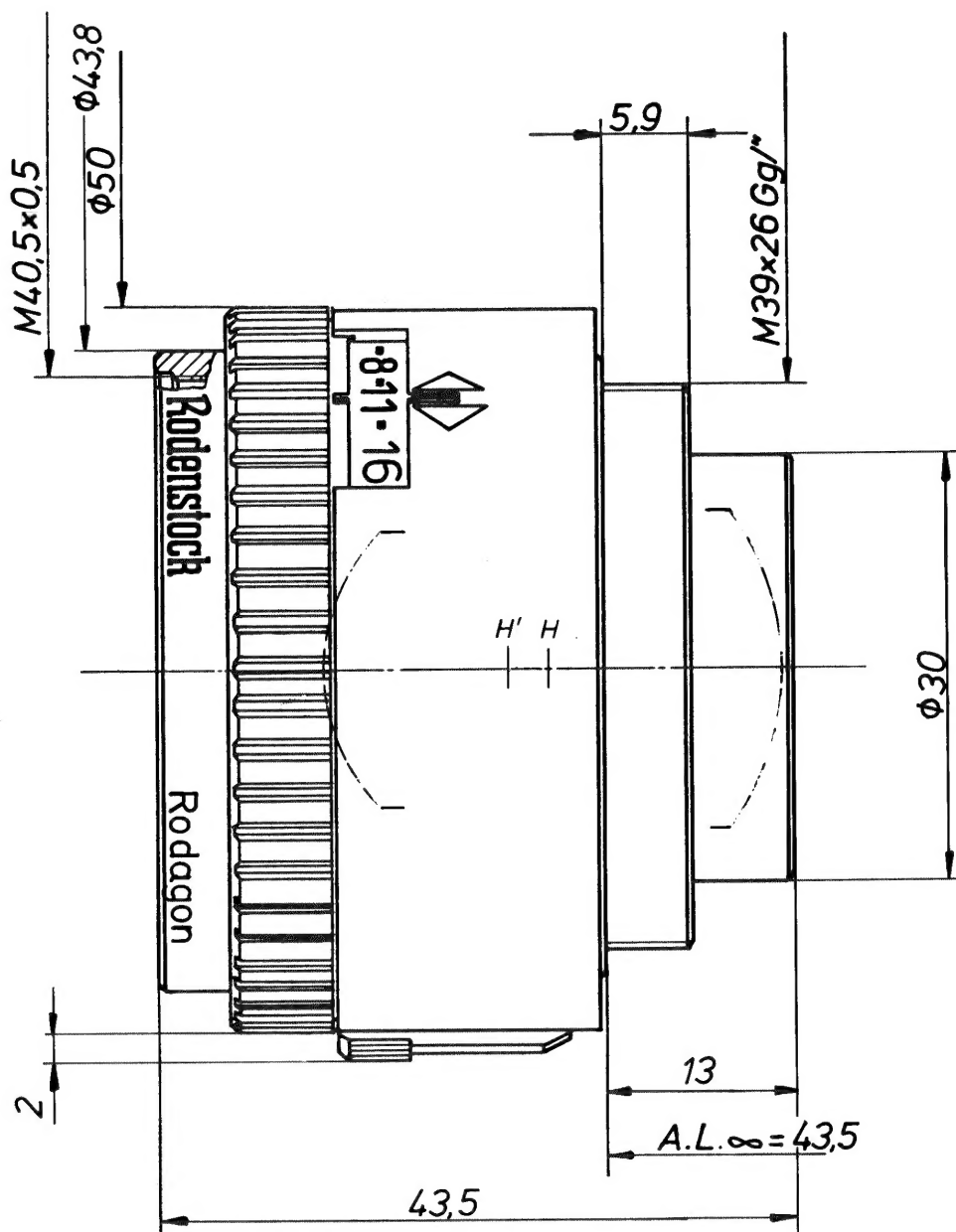
AN 0
ON 7404 - 17
8.0/ 35.1

ED = -0.080 PA25(T) LAM 378.0 444.0 510.0 576.0 642.0
PERED = VLAM BEW 50.0 95.0 89.0 54.0 21.0 30.0 100.0 13.0 54.0
ORTSFREQUENZ: 10, 20, 40 1/MM
SPATIAL FREQ:
(X=BEUG.THEOR.WERT)
(X=DIFFR.LIM.VAL.)
XS = 0.00 BETA' = -0.100 BLENDENDURCHM = 3.25 BLENDENZ = 1: 8.0
SCALE F-STOP DIAM. F-NUMB



REPRO-HANDBUCH PROCESS LENS MANUAL

Rodagon 1:2,8 f = 50 mm



Bestell-Nr. 270.0051.001.000
Zeichnungsnummer 0701.270.20/3296.1
Optik-Nr. 7509-9001
Zubehör 1 Schutzkappe,
 1 Anschraubring
optimaler
Abbildungsmaßstab β'_{opt} -10
effektive Brennweite f' 50.1
Schnittweite s'_F 31.3
Hauptpunktstand HH' -2.75
Bildwinkel $2w$ 46°

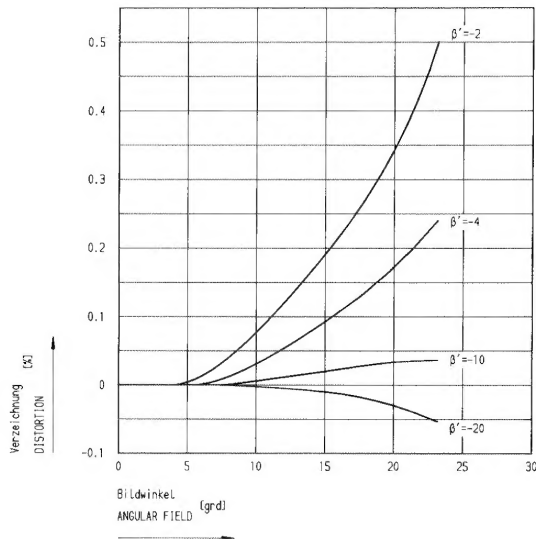
Alle nicht bezeichneten Maße sind Millimeterangaben

Order No. 270.0051.001.000
Drawing No. 0701.270.20/3296.1
Lens No. 7509-9001
Accessories 1 lens cap
 1 screw ring
Optimum scale β'_{opt} -10
Effective focal length f' 50.1 mm
Rear focus s'_F 31.3 mm
Separation of nodal points HH' -2.75 mm
Angle of field $2w$ 46°

All sizes not otherwise indicated are in mm

REPRO-HANDBUCH PROCESS LENS MANUAL

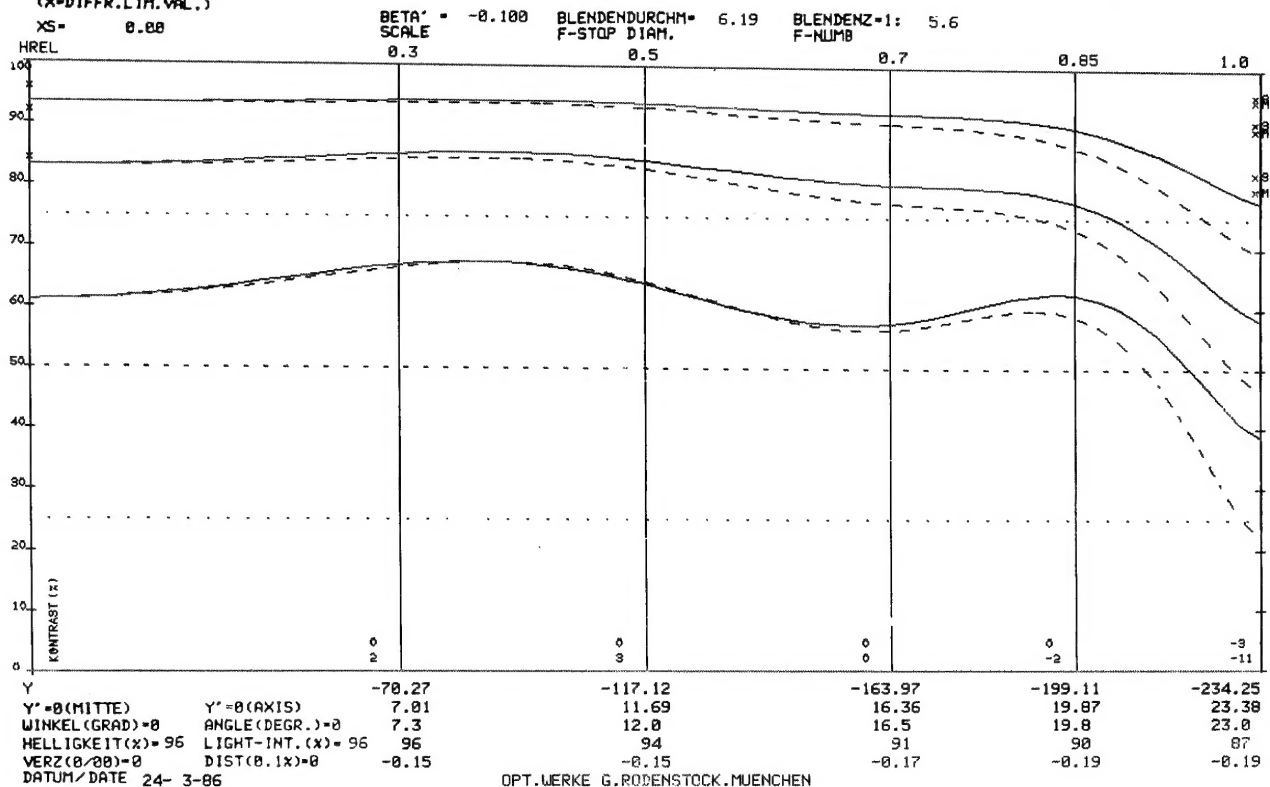
Rodagon 1:2,8 f = 50 mm



MTF (BEUG.OPT.) UEBER BILDFELD
MTF (DIFFRACT.) OVER IMAGE FIELD

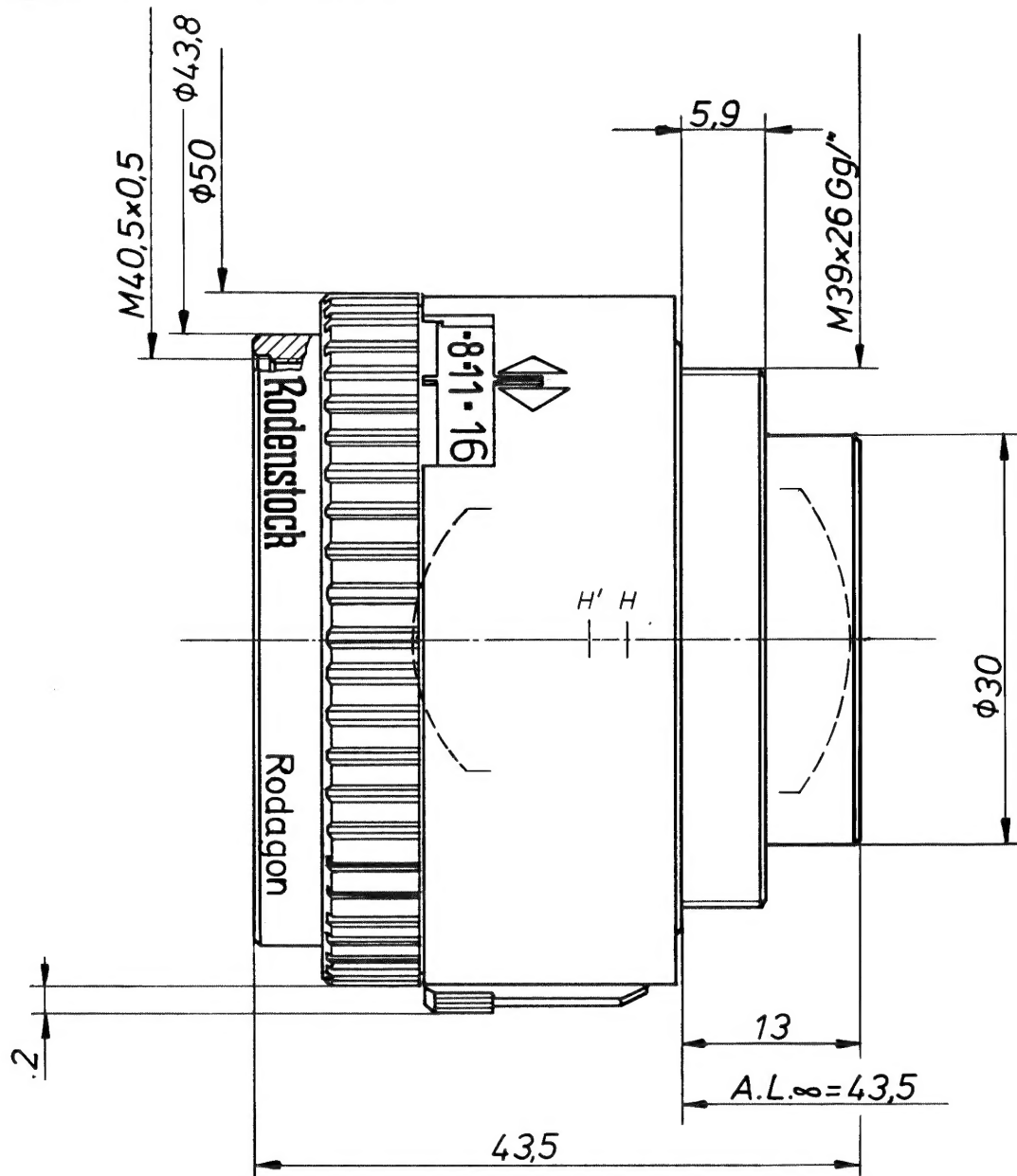
ED= -0.110 PA25(T) LAM 378.0 444.0 510.0 576.0 642.0
PERED= VLAM BEW 50.0 95.0 89.0 54.0 21.0 30.0 100.0 13.0 54.0
ORTSFREQUENZ: 10, 20, 40 1/MM
SPATIAL FREQ:
(X=BEUG. THEOR. WERT)
(X=DIFFR. LIM. VAL.)

AN 0
ON 7509 -9001
5.6/ 50.2



REPRO-HANDBUCH PROCESS LENS MANUAL

Rodagon 1:4 f = 50 mm



Bestell-Nr. 270.0050.001.000
Zeichnungsnummer 0701.270.21/3297.1
Optik-Nr. 7509-9001
Zubehör 1 Schutzkappe,
 1 Anschraubring
optimaler
Abbildungsmaßstab $\beta'_{\text{opt.}}$ -10
effektive Brennweite f' 50,1
Schnittweite s'_f 31,3
Hauptpunktstand HH' -2,75
Bildwinkel $2w$ 46°

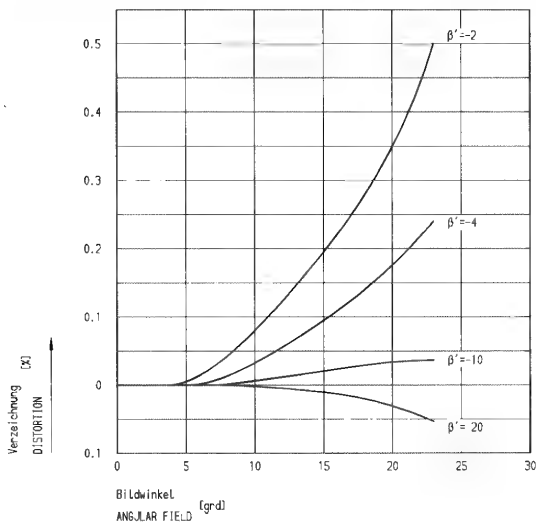
Alle nicht bezeichneten Maße sind Millimeterangaben

Order No. 270.0050.001.000
Drawing No. 0701.270.21/3297.1
Lens No. 7509-9001
Accessories 1 lens cap
 1 screw ring
Optimum scale $\beta'_{\text{opt.}}$ -10
Effective focal length f' 50.1 mm
Rear focus s'_f 31.3 mm
Separation of
nodal points HH' -2.75 mm
Angle of field $2w$ 46°

All sizes not otherwise indicated are in mm

REPRO-HANDBUCH PROCESS LENS MANUAL

Rodagon 1:4 f = 50 mm



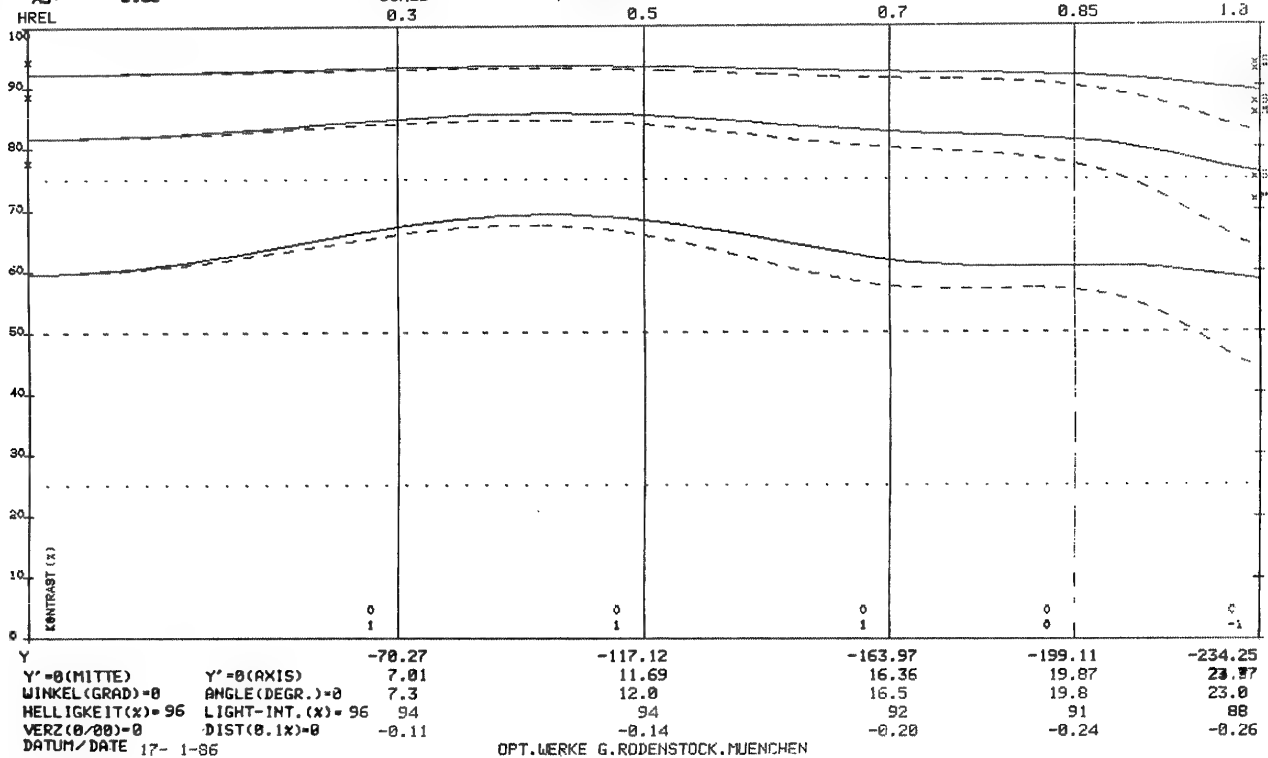
MTF (BEUG.OPT.) UEBER BILDFELD
MTF (DIFFRACT.) OVER IMAGE FIELD

AN 0

ON 7509 -9001

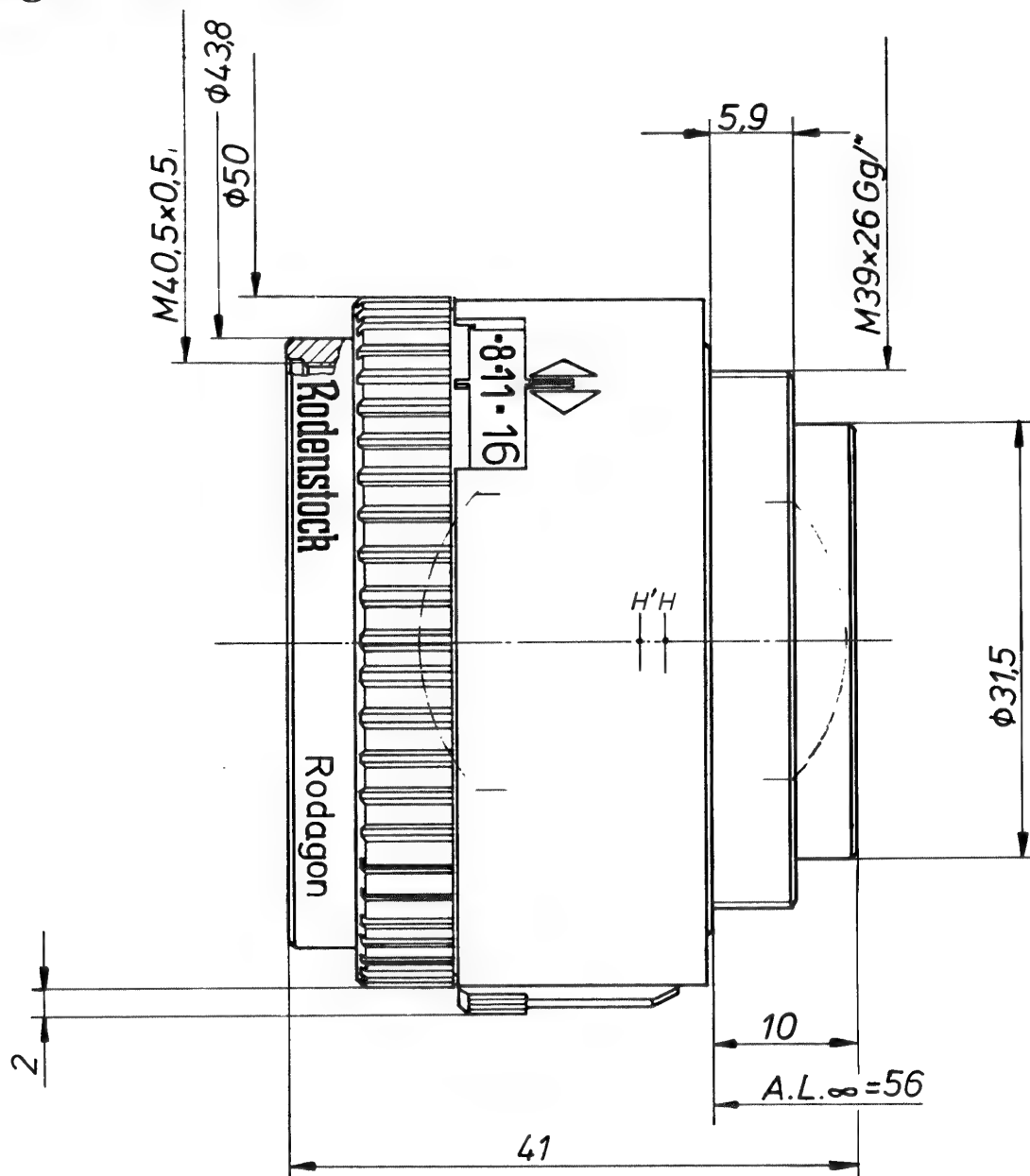
8.0/ 50.2

ED= -0.118 PA25(T) LAM 370.0 444.0 510.0 576.0 642.0
PERED= VLAM BEW 50.0 95.0 69.0 54.0 21.0 30.0 100.0 13.0 54.0
ORTSFREQUENZ: 10, 20, 40 1/MM
SPATIAL FREQ:
(X=BEUG.THEOR.WERT)
(X=DIFFR.LTM.VAL.)
XS= 0.00 BETA' = -0.100 BLENDENDURCHM= 4.34 BLENDENZ=1: 0.0
SCALE F-STOP DIAM. F-NUMB



REPRO-HANDBUCH PROCESS LENS MANUAL

Rodagon 1:4 f = 60 mm



Bestell-Nr. 270.0060.001.000
Zeichnungsnummer 0701.271.20/3298.2
Optik-Nr. 7441-015
Zubehör 1 Schutzkappe,
 1 Anschraubring
optimaler
Abbildungsmaßstab $\beta'_{\text{opt.}}$ -10
effektive Brennweite f' 61,8
Schnittweite s'_f 46,9
Hauptpunktabstand HH' -1,92
Bildwinkel $2w$ 52°

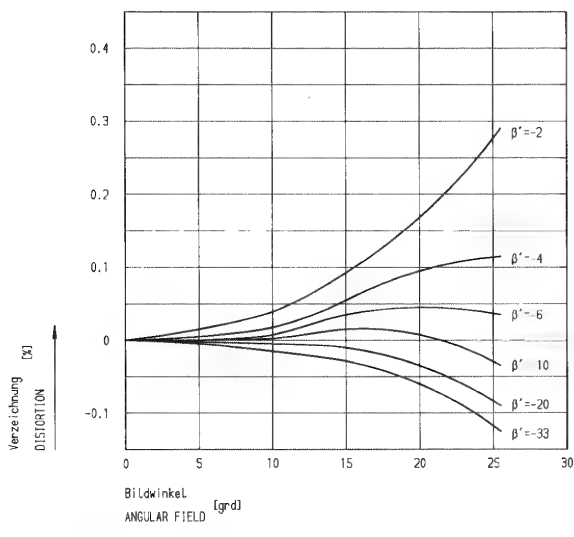
Alle nicht bezeichneten Maße sind Millimeterangaben

Order No. 270.0060.001.000
Drawing No. 0701.271.20/3298.2
Lens No. 7441-015
Accessories 1 lens cap
 1 screw ring
Optimum scale $\beta'_{\text{opt.}}$ -10
Effective focal length f' 61.8 mm
Rear focus s'_f 46.9 mm
Separation of nodal points HH' -1.92 mm
Angle of field $2w$ 52°

All sizes not otherwise indicated are in mm

REPRO-HANDBUCH PROCESS LENS MANUAL

Rodagon 1:4 f = 60 mm



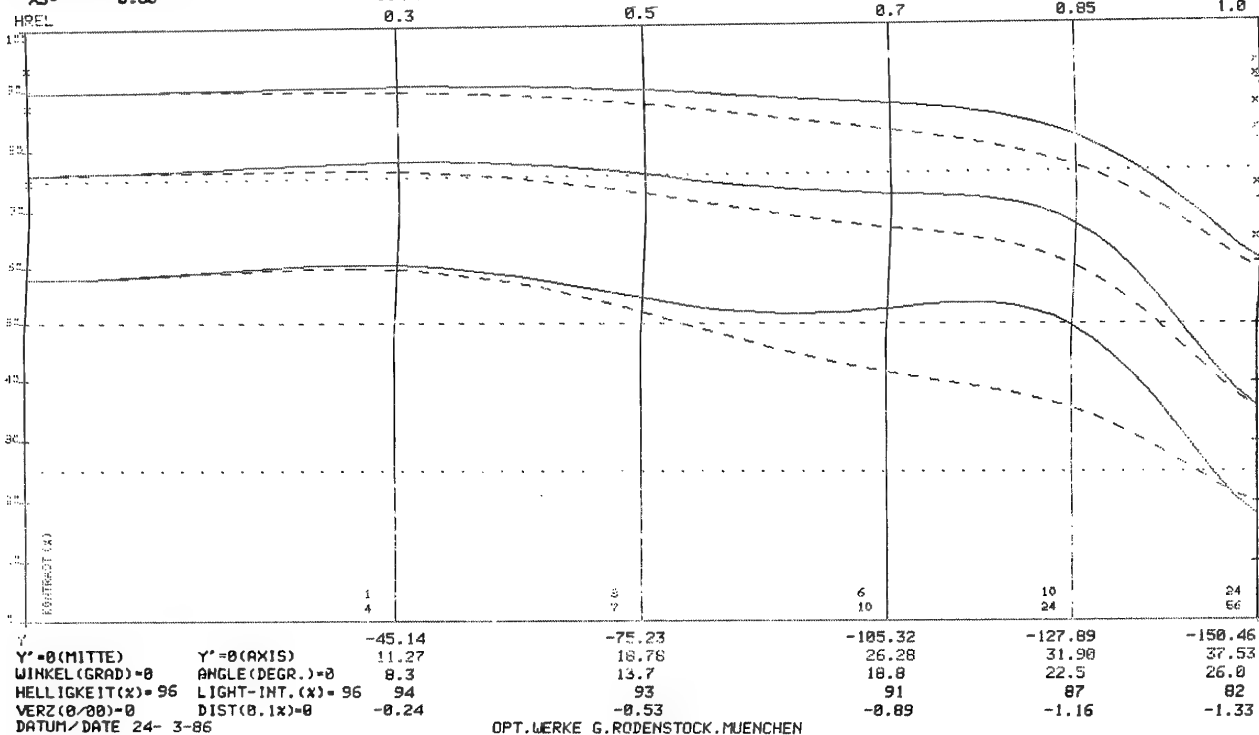
MTF (BEUG.OPT.) UEBER BILDFELD
MTF (DIFFRACT.) OVER IMAGE FIELD

AN 0

ON 7441 - 15

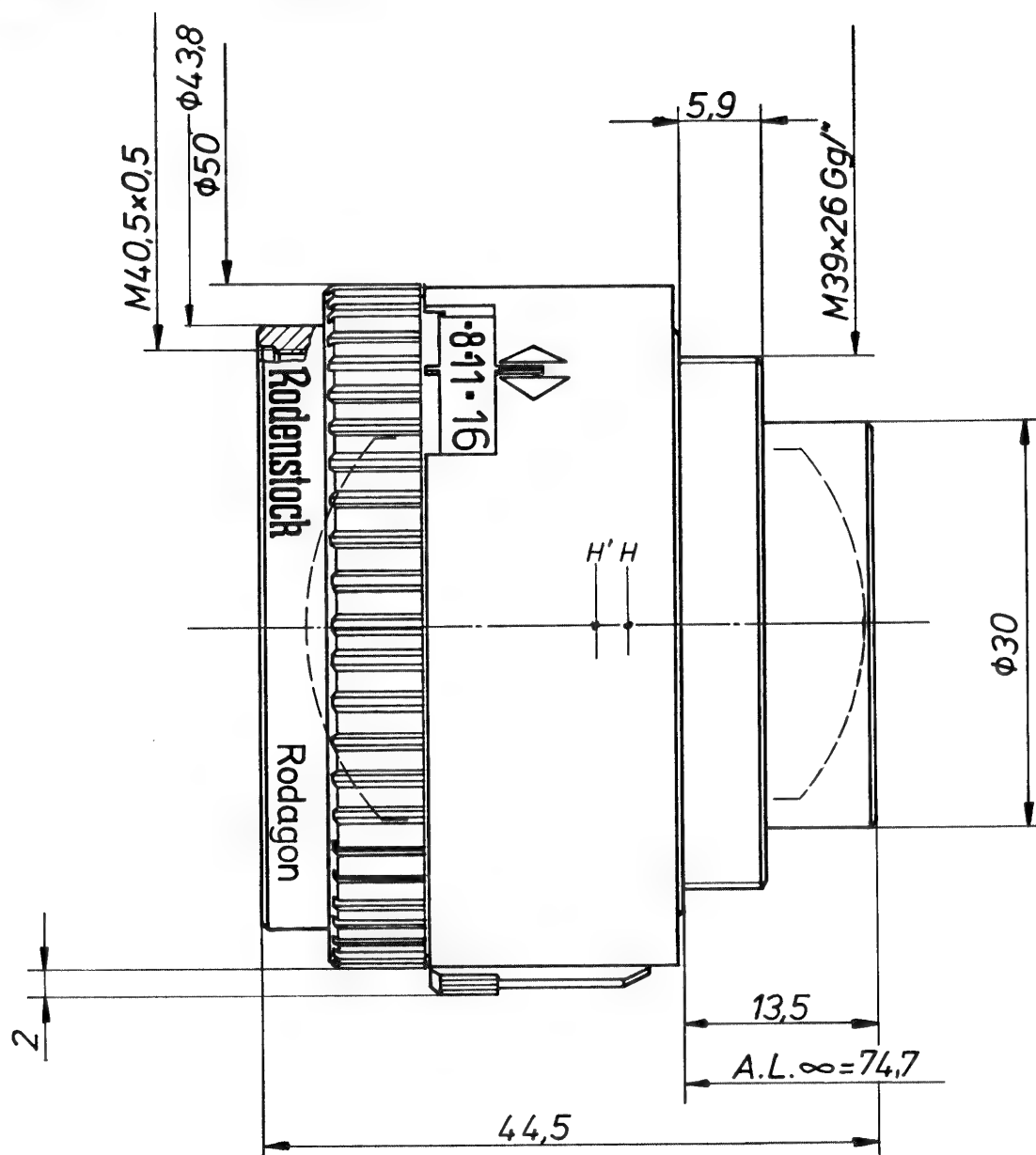
8.0/ 61.7

ED= -0.088 PA25(T) LPM 378.0 444.0 510.0 576.0 642.0
PERED= VLAM BEW 50.0 95.0 89.0 54.0 21.0 30.0 100.0 13.0 54.0
ORTSFREQUENZ: 10, 20, 40 1/MM
SPATIAL FREQ:
(X=BEUG.THEOR.WERT)
(X=DIFFR.LIM.VAL.)
XS= 0.00 BETA' = -0.250 BLENDENDURCHM= 5.51 BLENDENZ=1: 8.0
SCALE F-STOP DIAM. F-NUMB



REPRO-HANDBUCH PROCESS LENS MANUAL

Rodagon 1:4 f = 80 mm



Bestell-Nr. 270.0081.001.000
Zeichnungsnummer 0701.272.20/3299.1
Optik-Nr. 7431-051
Zubehör 1 Schutzkappe,
 1 Anschraubring
optimaler
Abbildungsmaßstab β'_{opt} -6
effektive Brennweite f' 81,0
Schnittweite s'_F 61,5
Hauptpunktstand HH' -2,46
Bildwinkel $2w$ 56°

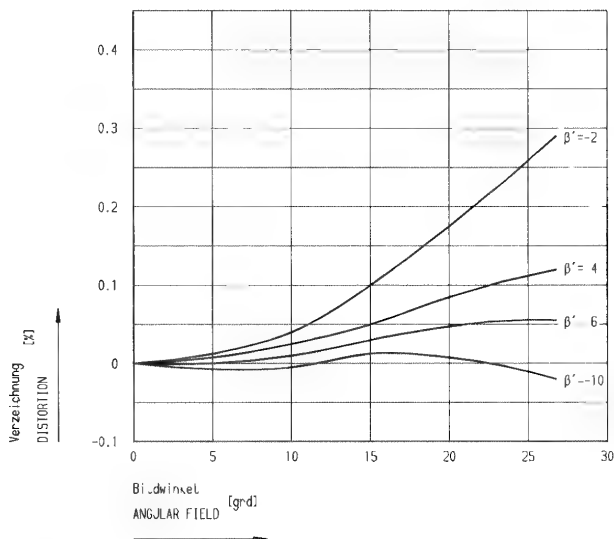
Alle nicht bezeichneten Maße sind Millimeterangaben

Order No. 270.0081.001.000
Drawing No. 0701.272.20/3299.1
Lens No. 7431-051
Accessories 1 lens cap
 1 screw ring
Optimum scale β'_{opt} -6
Effective focal length f' 81.0 mm
Rear focus s'_F 61.5 mm
Separation of nodal points HH' -2.46 mm
Angle of field $2w$ 56°

All sizes not otherwise indicated are in mm

REPRO-HANDBUCH PROCESS LENS MANUAL

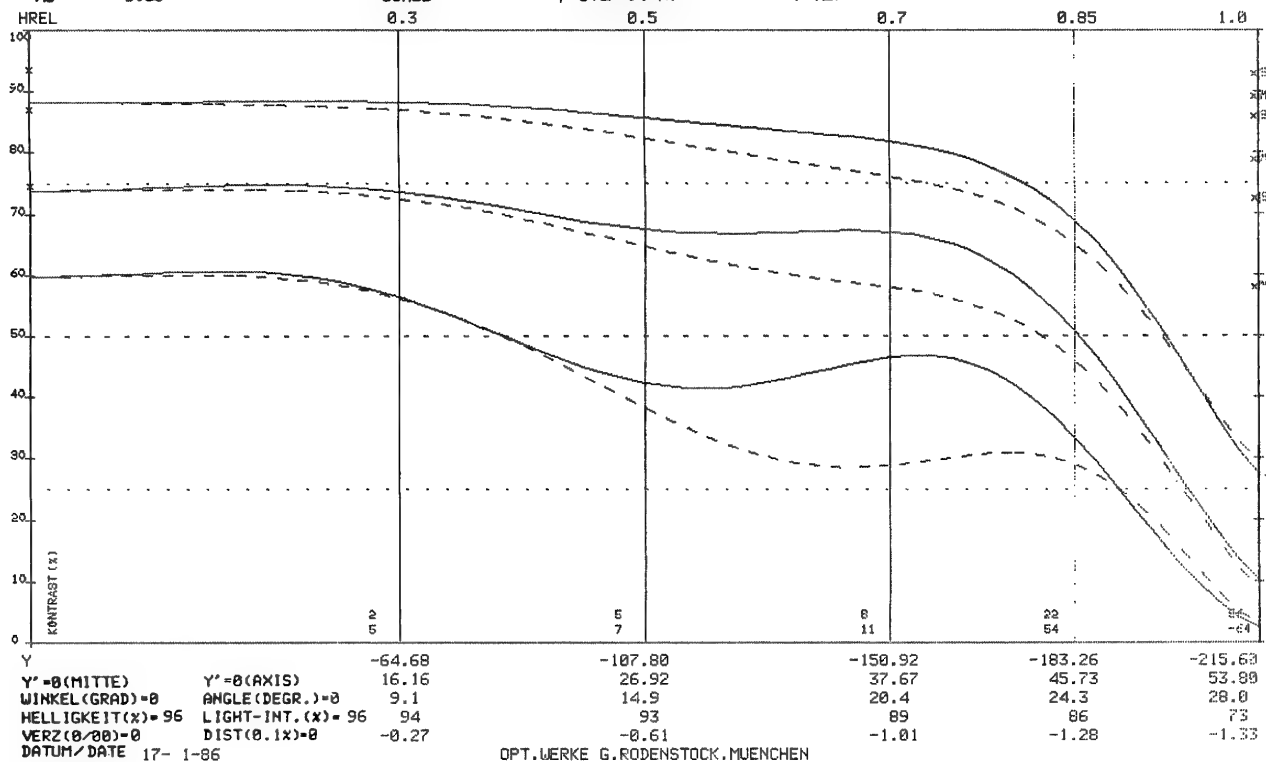
Rodagon 1:4 f = 80 mm



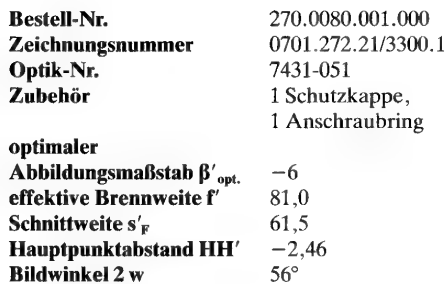
MTF (BEUG.OPT.) UEBER BILDFELD
MTF (DIFFRACT.) OVER IMAGE FIELD

ED= -0.060 PA25(T) LAM 378.0 444.0 510.0 576.0 642.0
PERED= VLAM
ORTSFREQUENZ: 10. 20. 40 1/MM
SPATIAL FREQ:
(X=BEUG.THEOR.WERT)
(X=DIFFR.LIM.VAL.)
XS= 0.80 BETA' = -0.250 BLENDENDURCHM= 7.25 BLENDENZ=1: 8.0
SCALE F-STOP DIAM. F-NUMB

AN 0
ON 7431 - 51
8.0/ 81.1



Rodagon 1:5,6 f = 80 mm

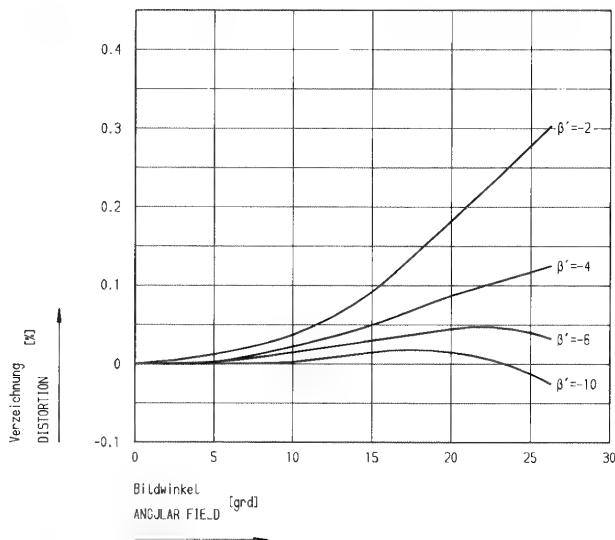


Order No.	270.0080.001.000
Drawing No.	0701.272.21/3300.1
Lens No.	7431-051
Accessories	1 lens cap 1 screw ring
Optimum scale β'_{opt}	-6
Effective focal length f'	81.0 mm
Rear focus s'_F	61.5 mm
Separation of nodal points HH'	-2.46 mm
Angle of field 2 w	56°

6-17

REPRO-HANDBUCH PROCESS LENS MANUAL

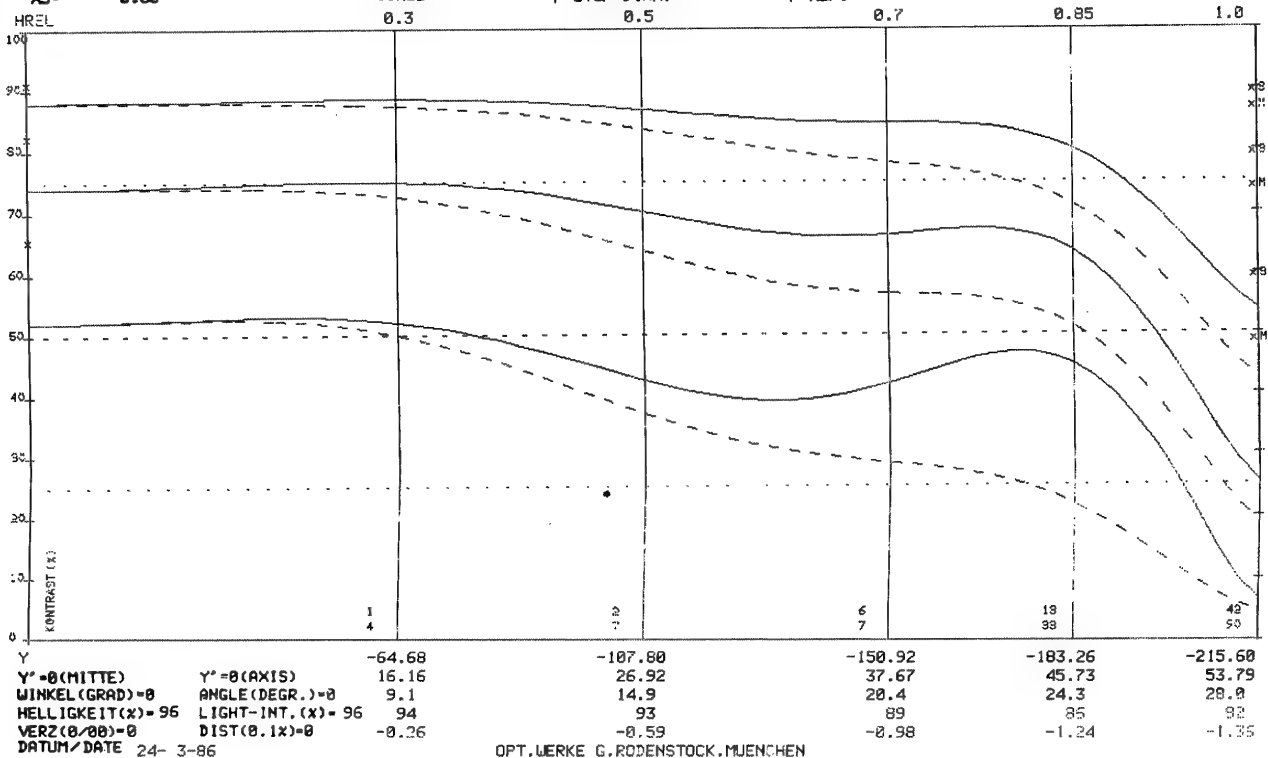
Rodagon 1:5,6 f = 80 mm



MTF (BEUG.OPT.) UEBER BILDFELD
MTF (DIFFRACT.) OVER IMAGE FIELD

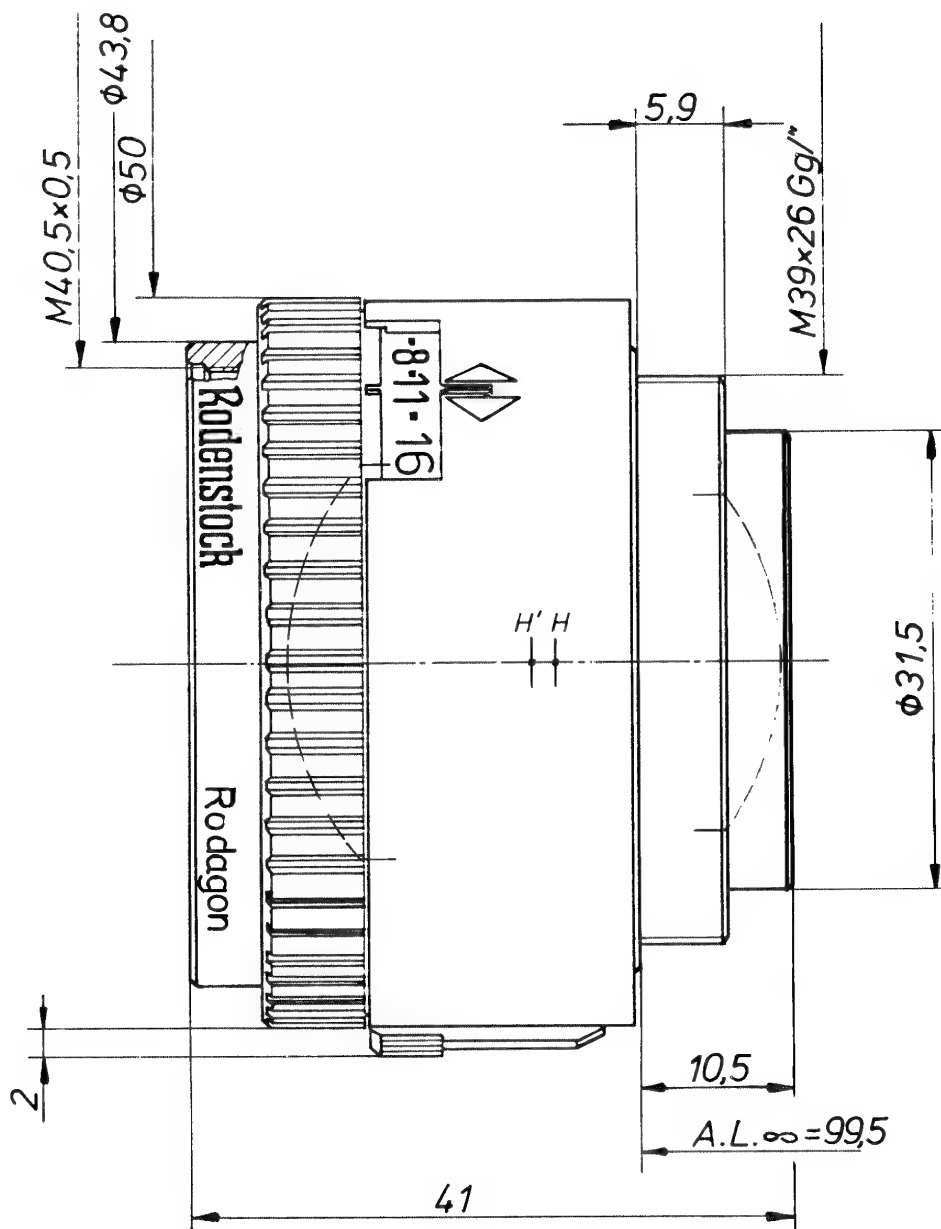
AN 0
ON 7431 - 51
11.0/ 91.1

ED= -0.060 PA25(T) LAM 378.0 444.0 510.0 576.0 642.0
PERED= VLAM BEW 50.0 95.0 89.0 54.0 21.0 30.0 100.0 13.0 54.0
ORTSFREQUENZ: 10, 20, 40 1/MM
SPATIAL FREQ:
(X=BEUG.THEOR.WERT)
(X=DIFFR.LTH.VAL.)
XS= 0.00 BETA' = -0.250 BLENDENDURCHM= 5.28 BLENDENZ=1: 11.0
SCALE F-STOP DIAM. F-NUMB



REPRO-HANDBUCH PROCESS LENS MANUAL

Rodagon 1:5,6 f = 105 mm



Bestell-Nr. 271.0105.001.000
Zeichnungsnummer 0701.273.20/3301.2
Optik-Nr. 7453-023
Zubehör 1 Schutzkappe,
 1 Anschraubring
optimaler
Abbildungsmaßstab β'_{opt} -6
effektive Brennweite f' 106,4
Schnittweite s'_F 89,4
Hauptpunktstand HH' -1,65
Bildwinkel $2w$ 52°

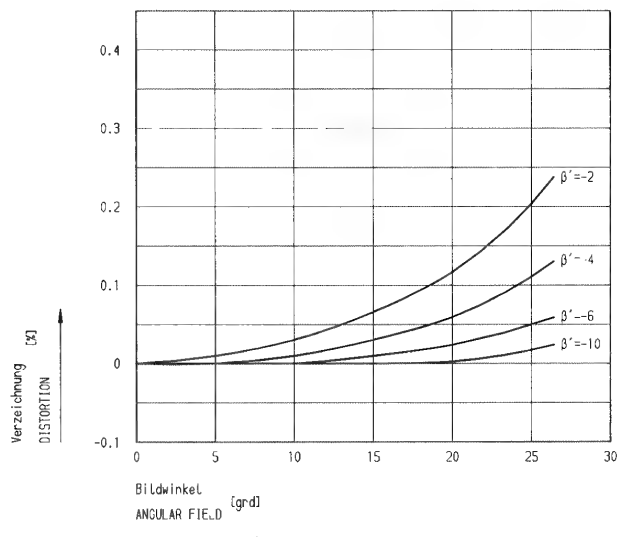
Alle nicht bezeichneten Maße sind Millimeterangaben

Order No. 271.0105.001.000
Drawing No. 0701.273.20/3301.2
Lens No. 7453-023
Accessories 1 lens cap
 1 screw ring
Optimum scale β'_{opt} -6
Effective focal length f' 106.4 mm
Rear focus s'_F 89.4 mm
Separation of nodal points HH' -1.65 mm
Angle of field $2w$ 52°

All sizes not otherwise indicated are in mm

REPRO-HANDBUCH PROCESS LENS MANUAL

Rodagon 1:5,6 f = 105 mm



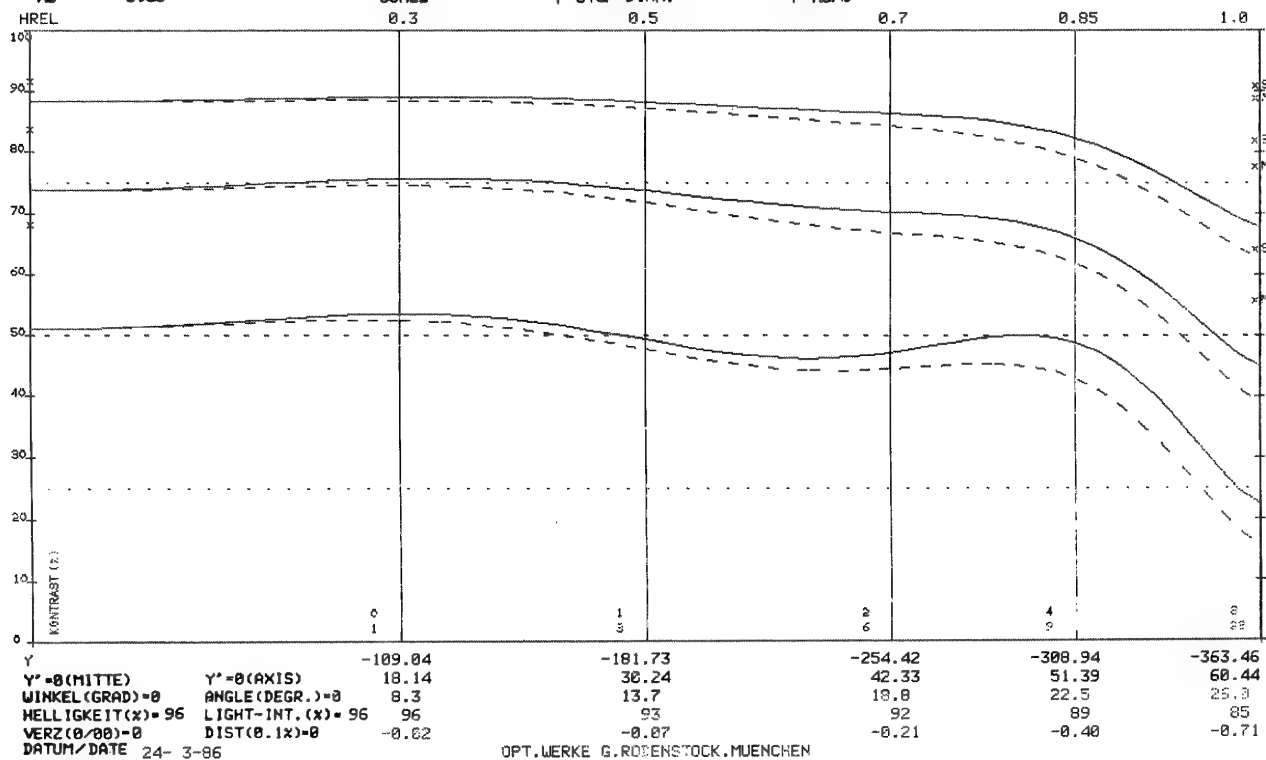
MTF (BEUG.OPT.) UEBER BILDFELD
MTF (DIFFRACT.) OVER IMAGE FIELD

AN 0

ED= -0.150 PA25(T) LAM 378.0 444.0 510.0 576.0 642.0
PERED= VLAM BEW 50.0 95.0 89.0 54.0 21.0 30.0 100.0 13.0 54.0
ORTSFREQUENZ: 10. 20. 40 1/MM
SPATIAL FREQ:
(X=BEUG.THEOR.WERT)
(X=DIFFR.LIM.VAL.)
XS= 0.00 BETA' = -0.167 BLENDENDURCHM= 7.70 BLENDENZ=1: 11.0
SCALE F-STOP DIAM. F-NUMB

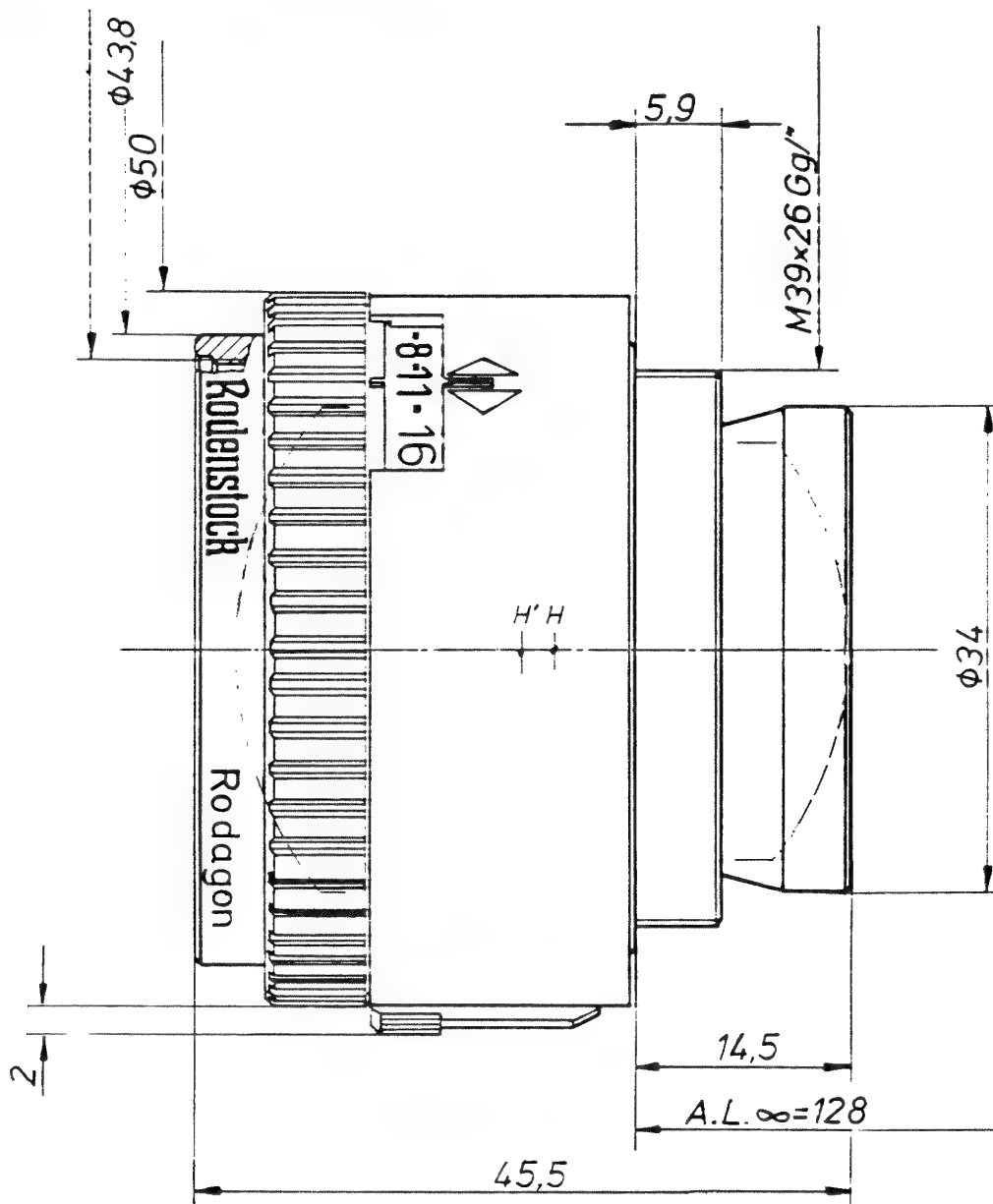
ON 7453 - 23

11.0/ 136.4



REPRO-HANDBUCH PROCESS LENS MANUAL

Rodagon 1:5,6 f = 135 mm



Bestell-Nr. 271.0135.001.000
Zeichnungsnummer 0701.274.20/3302.2
Optik-Nr. 7461-2701
Zubehör 1 Schutzkappe,
 1 Anschraubring
optimaler
Abbildungsmaßstab $\beta'_{opt.}$ -6
effektive Brennweite f' 135,7
Schnittweite s'_f 113,5
Hauptpunktabstand HH' -2,45
Bildwinkel $2w$ 56°

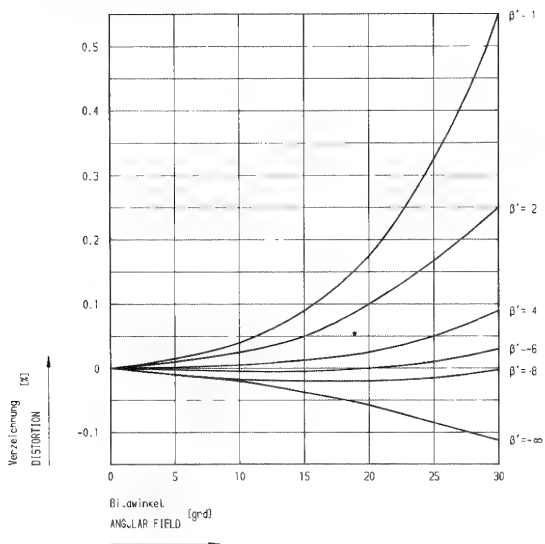
Alle nicht bezeichneten Maße sind Millimeterangaben

Order No. 271.0135.001.000
Drawing No. 0701.274.20/3302.2
Lens No. 7461-2701
Accessories 1 lens cap
 1 screw ring
Optimum scale $\beta'_{opt.}$ -6
Effective focal length f' 135.7 mm
Rear focus s'_f 113.5 mm
Separation of nodal points HH' -2.45 mm
Angle of field $2w$ 56°

All sizes not otherwise indicated are in mm

REPRO-HANDBUCH PROCESS LENS MANUAL

Rodagon 1:5,6 f = 135 mm

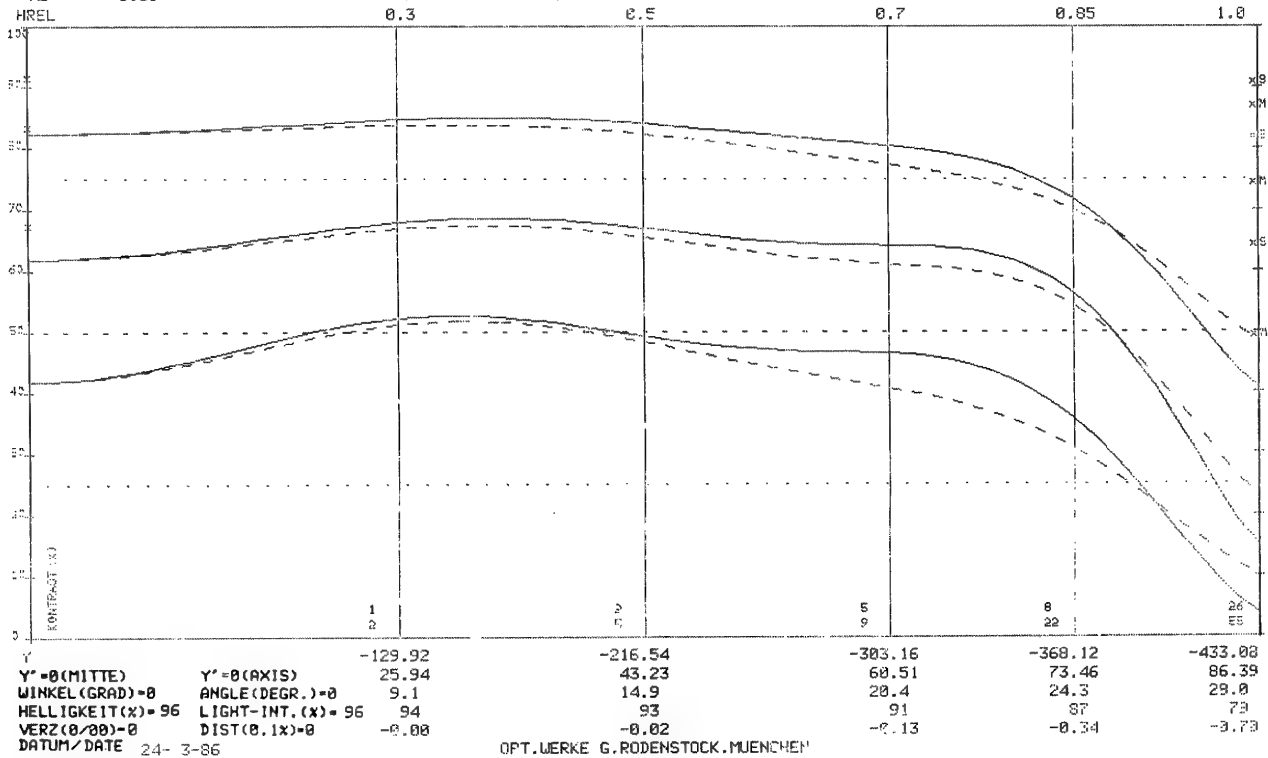


MTF (BEUG.OPT.) UEBER BILDFELD
MTF (DIFFRACT.) OVER IMAGE FIELD

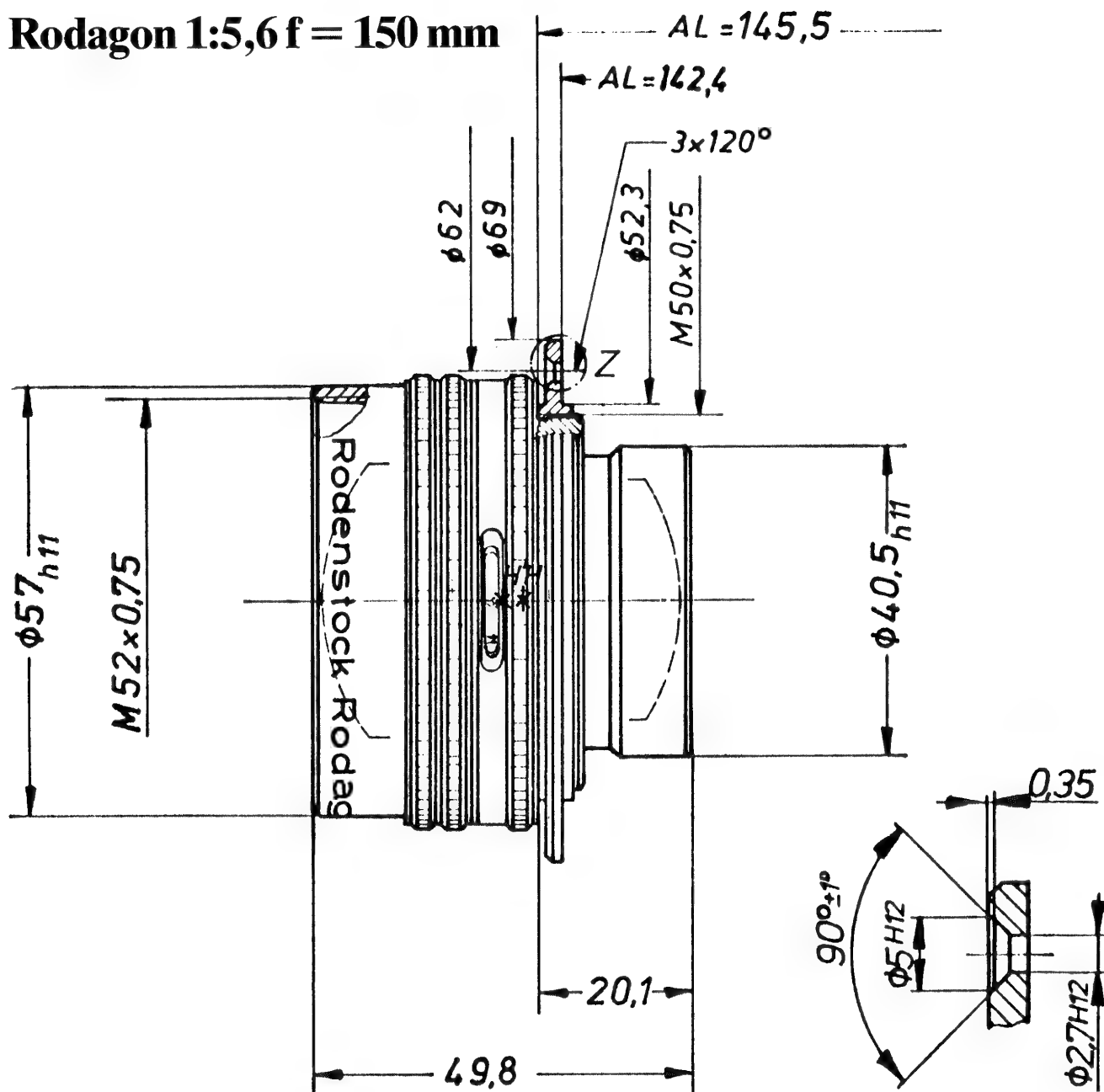
ED= -0.300 PA25(T) LAM 378.0 444.0 510.0 576.0 642.0
PERED= VLAM BEW 50.0 95.0 89.0 54.0 21.0 39.0 100.0 13.0 54.0
ORTSFREQUENZ: 10. 20. 40 1/MM
SPATIAL FREQ:
(X=BEUG.THEOR.WERT)
(X=DIFFR.LIM.VAL.)

AN 0
ON 7461 -2701
11.0/ 135.8

BETA' = -0.200 BLENDENDURCHM= 9.82 BLENDENZ=1: 11.0
SCALE F-STOP DIAM. F-NUMB



Rodagon 1:5,6 f = 150 mm



Bestell-Nr.	271.0150.001.000
Zeichnungsnummer	0701.198/1994.2
Optik-Nr.	7457-022
Zubehör	1 Schutzkappe 2406.117 1 Schutzkappe 2406.145 1 Anschraubring

optimaler	
Abbildungsmaßstab β'_{opt}	-6
effektive Brennweite f'	150,3
Schnittweite s'_F	126,2
Hauptpunktastand HH'	-2,35
Bildwinkel $2w$	52°

Alle nicht bezeichneten Maße sind Millimeterangaben

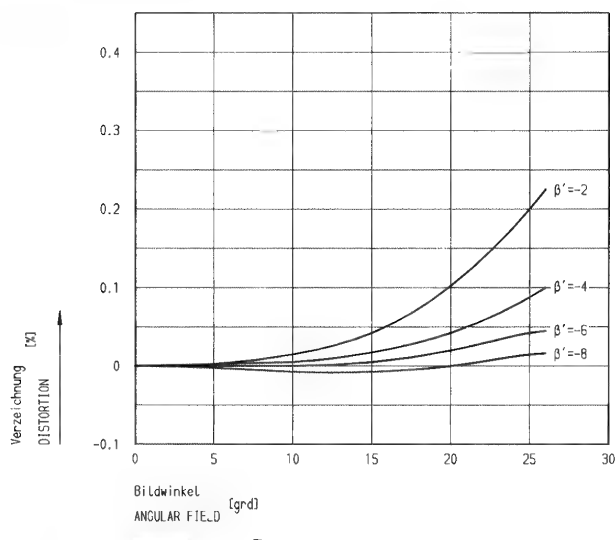
Order No.	271.0150.001.000
Drawing No.	0701.198/1994.2
Lens No.	7457-022
Accessories	1 lens cap 2406.117

Optimum scale $\beta'_{\text{opt.}}$	-6
Effective focal length f'	150.3 mm
Rear focus s'_F	126.2 mm
Separation of nodal points HH'	-2.35 mm
Angle of field $2w$	52°

All sizes not otherwise indicated are in mm

REPRO-HANDBUCH PROCESS LENS MANUAL

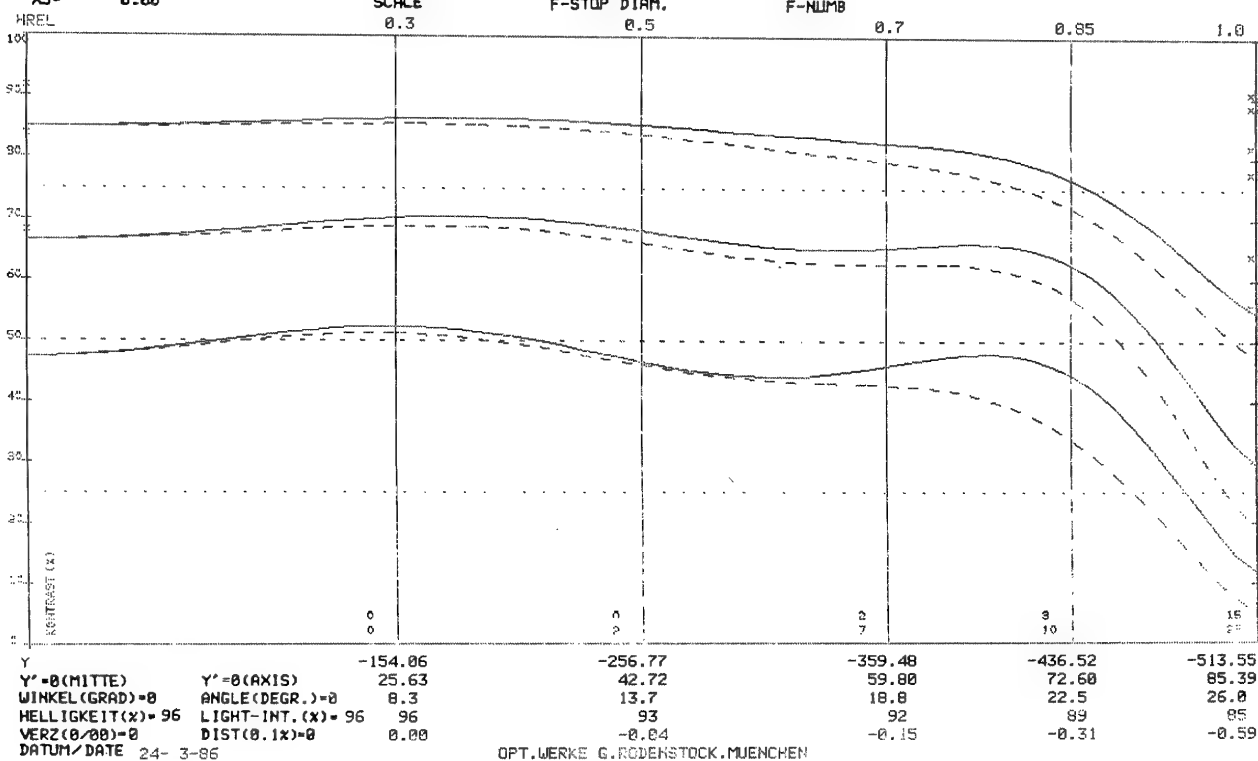
Rodagon 1:5,6 f = 150 mm



MTF (BEUG.OPT.) UEBER BILDFELD
MTF (DIFFRACT.) OVER IMAGE FIELD

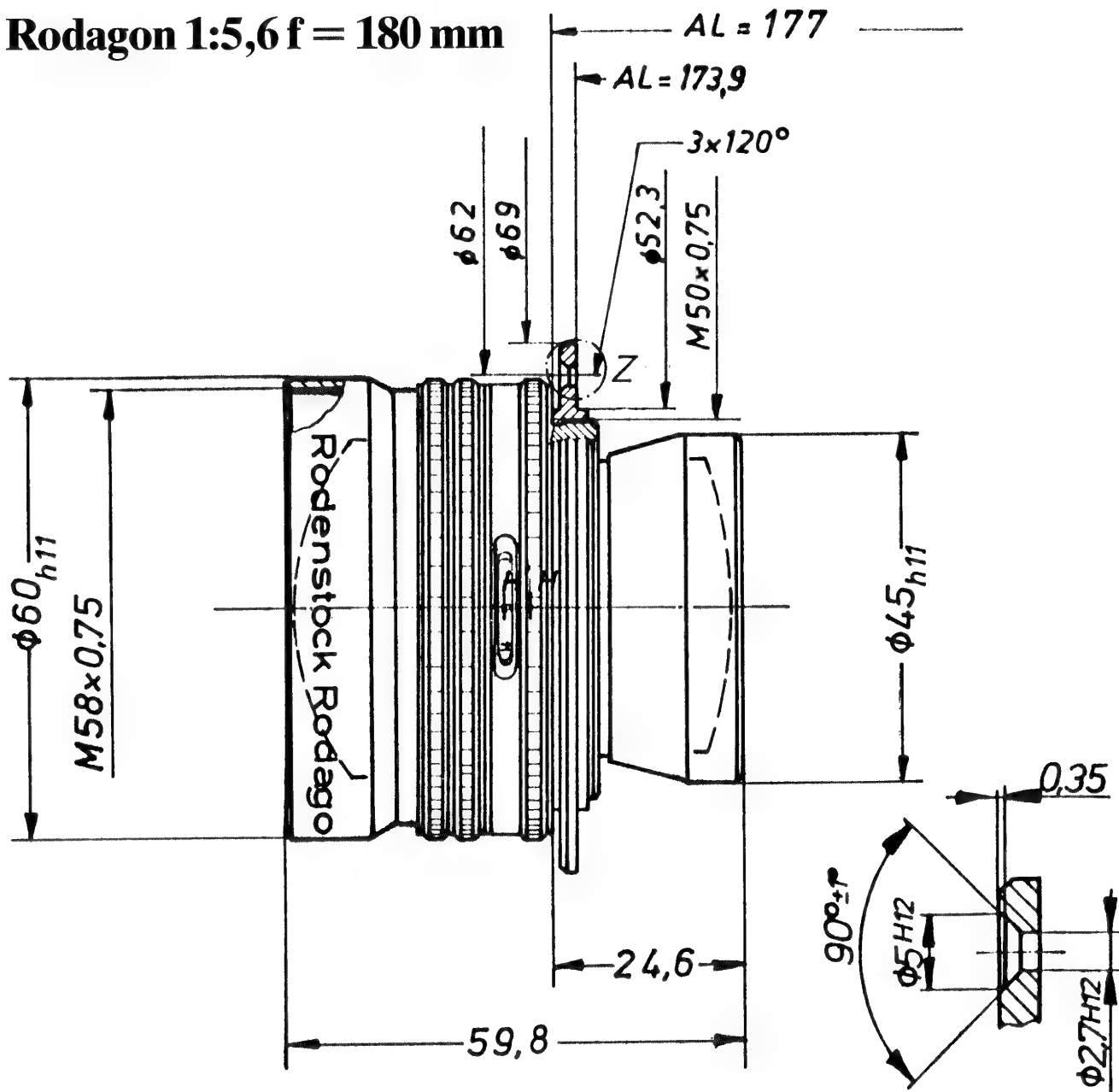
AN 0
ON 7457 - 22
11.0/ 159.4

ED= -0.230 PA25(T) LAM 378.0 444.0 510.0 576.0 642.0
PERED= VLAM BEW 50.0 95.0 89.0 54.0 21.0 30.0 100.0 13.0 54.0
ORTSFREQUENZ: 10. 20. 40 1/11
SPATIAL FREQ:
(X=BEUG.THEOR.WERT)
(X=DIFFR.LIM.VAL.)
XS= 0.00 BETA' = -0.167 BLENDENDURCHM= 10.88 BLENDENZ=1: 11.0
SCALE F-STOP DIAM. F-NUMB



REPRO-HANDBUCH PROCESS LENS MANUAL

Rodagon 1:5,6 f = 180 mm



Bestell-Nr. 271.0180.001.000
Zeichnungsnummer 0701.199/1996.2
Optik-Nr. 7460-1101
Zubehör 1 Schutzkappe 2406.113
 1 Schutzkappe 2406.138
 1 Anschraubring
optimaler
Abbildungsmaßstab β'_{opt} -5
effektive Brennweite f' 182,5
Schnittweite s'_F 153
Hauptpunktstand HH' -3,22
Bildwinkel 2 w 56°

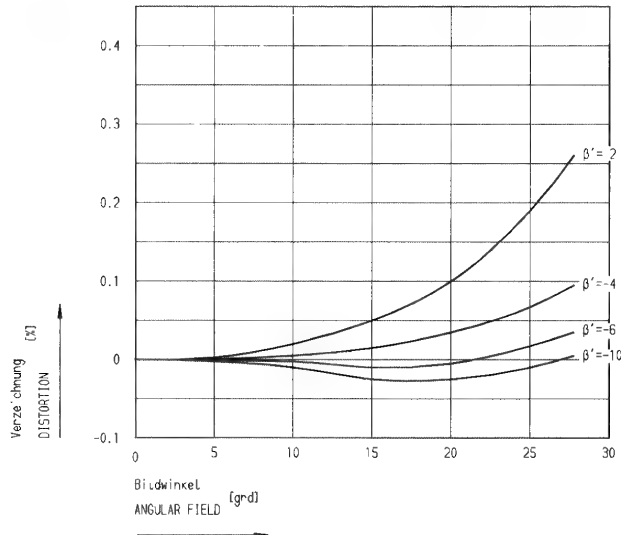
Alle nicht bezeichneten Maße sind Millimeterangaben

Order No. 271.0180.001.000
Drawing No. 0701.199/1996.2
Lens No. 7460-1101
Accessories 1 lens cap 2406.113
 1 lens cap 2406.138
 1 screw ring
Optimum scale β'_{opt} -5
Effective focal length f' 182.5 mm
Rear focus s'_F 153 mm
Separation of nodal points HH' -3.22 mm
Angle of field 2 w 56°

All sizes not otherwise indicated are in mm

REPRO-HANDBUCH PROCESS LENS MANUAL

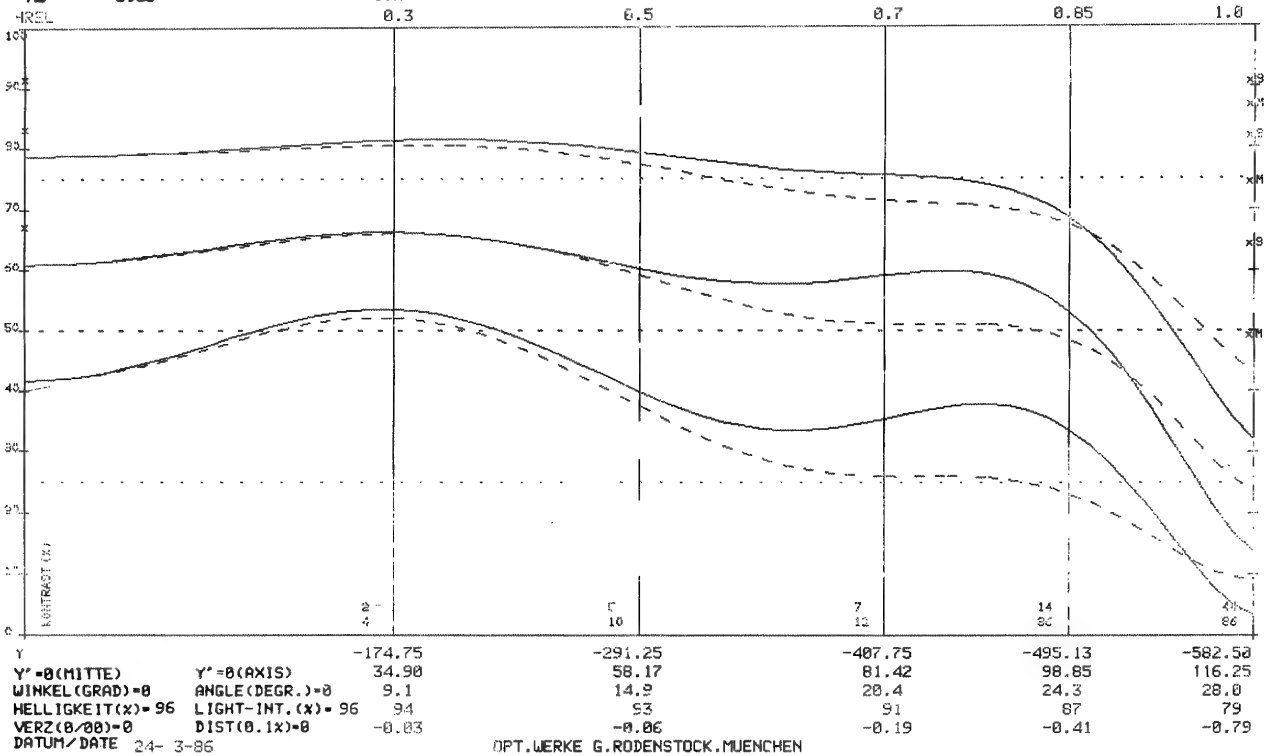
Rodagon 1:5,6 f = 180 mm



MTF (BEUG.OPT.) UEBER BILDFELD
MTF (DIFFRACT.) OVER IMAGE FIELD

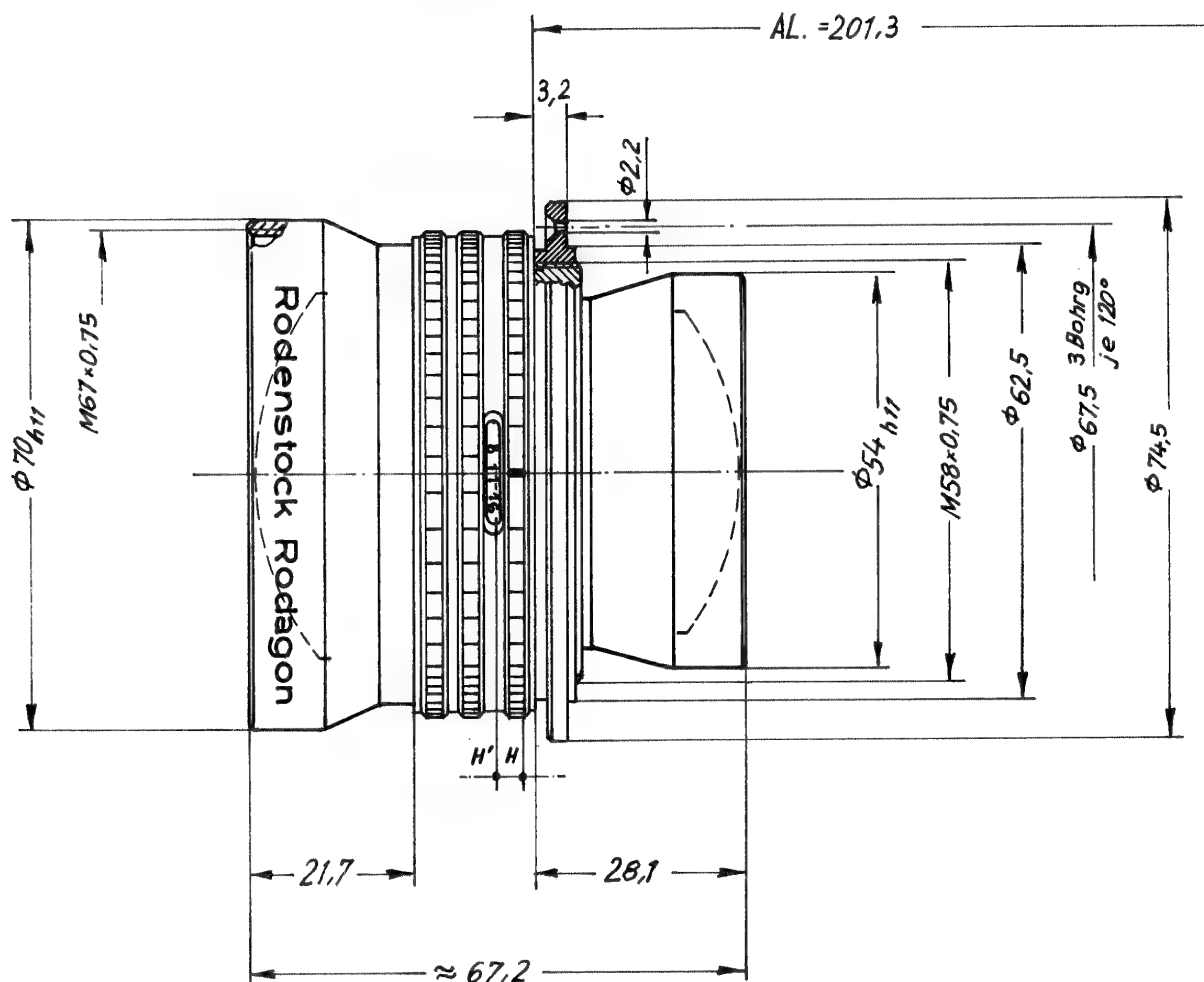
AN 0
ON 7460 -1101
11.0/ 182.6

ED= -0.300 PA25(T) LAM 378.0 444.0 510.0 576.0 642.0
PERED= VLAM
ORTSFREQUENZ: 10. 20. 40 1/MM
SPATIAL FREQ:
(X=BEUG.THEOR.WERT)
(X=DIFFR.LIM.VAL.)
XS= 0.00 BETA' = -0.200 BLENDENDURCHM= 13.23 BLENDENZ=1: 11.0
SCALE F-STOP DIAM. F-NUMB



REPRO-HANDBUCH PROCESS LENS MANUAL

Rodagon 1:5,6 $f = 210$ mm



Bestell-Nr.	271.0210.001.000
Zeichnungsnummer	0701.200/1965.1
Optik-Nr.	7425-6201
Zubehör	1 Schutzkappe vorne 2406.118 1 Schutzkappe hinten 2406.116 1 Anschraubring
optimaler Abbildungsmaßstab $\beta'_{opt.}$	-4
effektive Brennweite f'	206,5
Schnittweite s'_F	173,7
Hauptpunktstand HH'	-3,55
Bildwinkel 2 w	52°

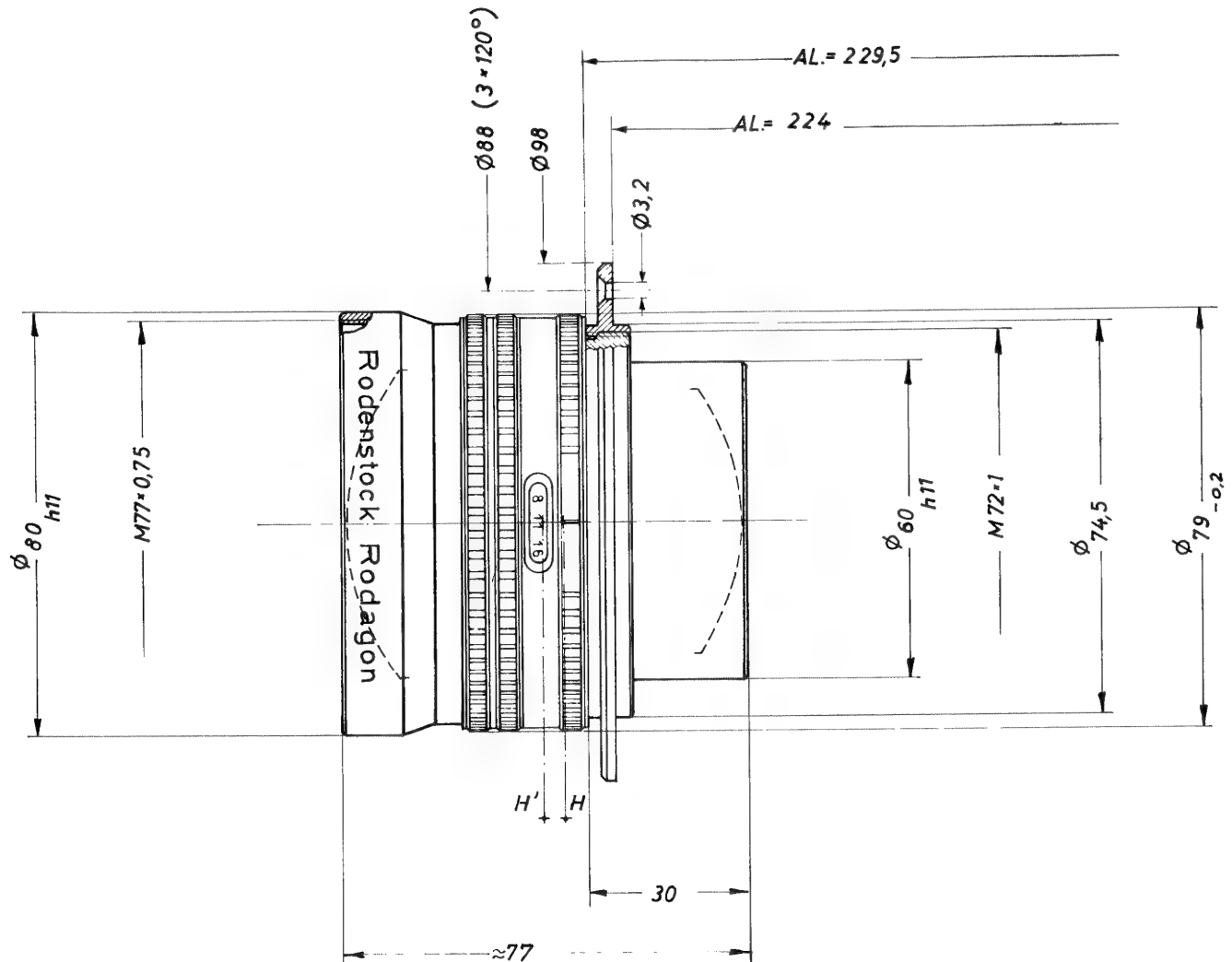
Alle nicht bezeichneten Maße sind Millimeterangaben

Order No.	271.0210.001.000
Drawing No.	0701.200/1965.1
Lens No.	7425-6201
Accessories	1 front lens cap 2406.118 1 rear lens cap 2406.116 1 screw ring
Optimum scale $\beta'_{opt.}$	-4
Effective focal length f'	206.5 mm
Rear focus s'_F	173.7 mm
Separation of nodal points HH'	-3.55 mm
Angle of field 2 w	52°

All sizes not otherwise indicated are in mm

REPRO-HANDBUCH PROCESS LENS MANUAL

Rodagon 1:5,6 $f = 240$ mm



Bestell-Nr.	271.0240.001.000
Zeichnungsnummer	0701.201/2014.1
Optik-Nr.	7462-045
Zubehör	1 Schutzkappe vorne 2406.129 1 Schutzkappe hinten 2406.113 1 Anschraubring
optimaler Abbildungsmaßstab $\beta'_{\text{opt.}}$	-4
effektive Brennweite f'	237,9
Schnittweite s'_f	200,5
Hauptpunktstand HH'	-3,85
Bildwinkel $2w$	56°

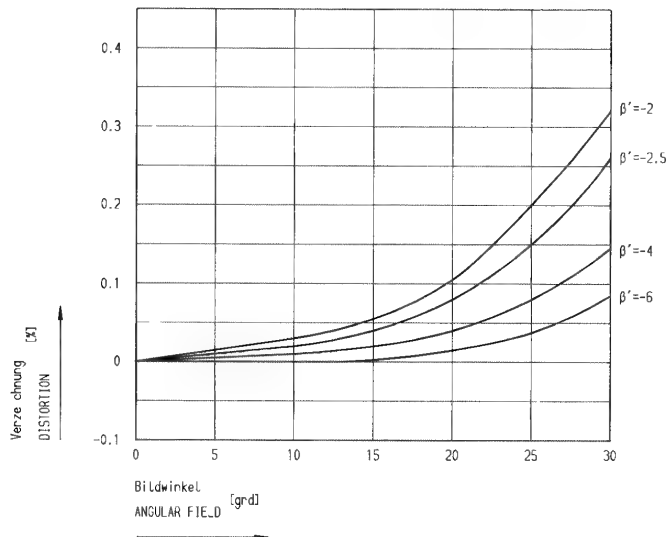
Alle nicht bezeichneten Maße sind Millimeterangaben

Order No.	271.0240.001.000
Drawing No.	0701.201/2014.1
Lens No.	7462-045
Accessories	1 front lens cap 2406.129 1 rear lens cap 2406.113 1 screw ring
Optimum scale $\beta'_{\text{opt.}}$	-4
Effective focal length f'	237.9 mm
Rear focus s'_f	200.5 mm
Separation of nodal points HH'	-3.85 mm
Angle of field $2w$	56°

All sizes not otherwise indicated are in mm

REPRO-HANDBUCH PROCESS LENS MANUAL

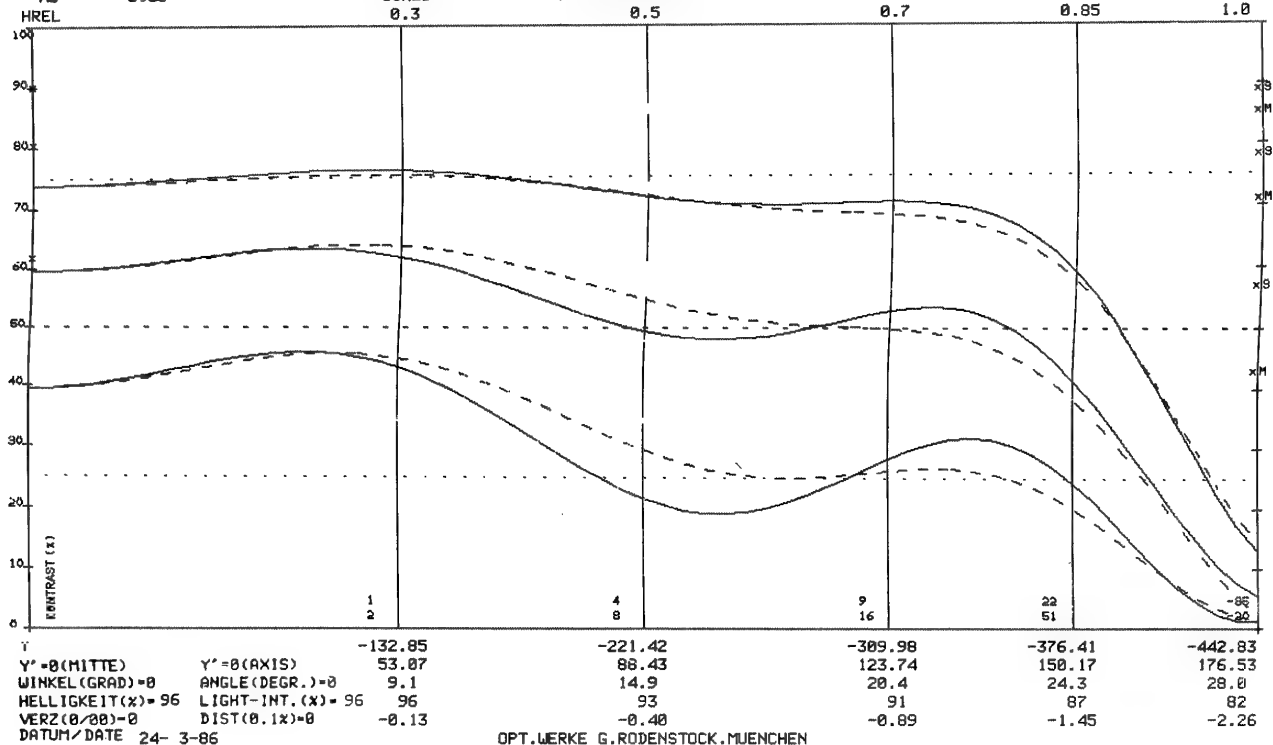
Rodagon 1:5,6 f = 240 mm



MTF (BEUG.OPT.) UEBER BILDFELD
MTF (DIFFRACT.) OVER IMAGE FIELD

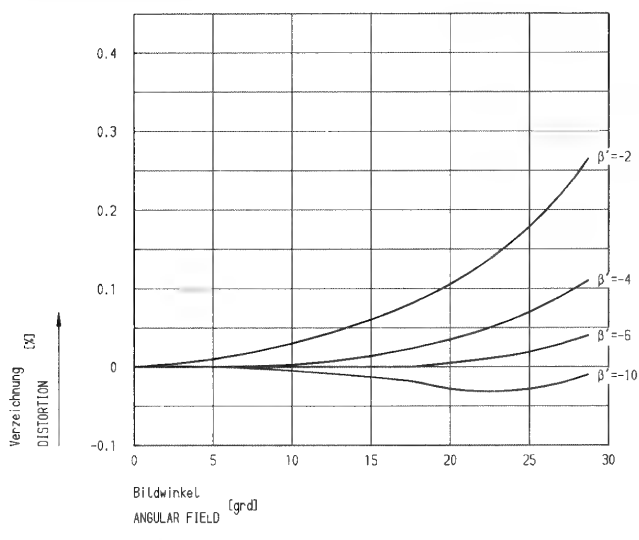
ED= -0.375 PA25(T) LAM 378.0 444.0 510.0 576.0 642.0
PERED= VLAM BEW 58.0 95.0 89.0 54.0 21.0 30.0 100.0 13.0 54.0
ORTSFREQUENZ: 10, 20, 40 1/MM
SPATIAL FREQ:
(X=BEUG.THEOR.WERT)
(X=DIFFR.LIM.VAL.)
XS= 0.00 BETA' = -0.400 BLENDENDURCHM= 17.31 BLENDENZ=1: 11.0
SCALE 0.3 F-STOP DIAM. 0.5 F-NUMB 0.7 0.85 1.0

AN 0
ON 7462 - 45
11.0/ 239.0



REPRO-HANDBUCH PROCESS LENS MANUAL

Rodagon 1:5,6 f = 300 mm

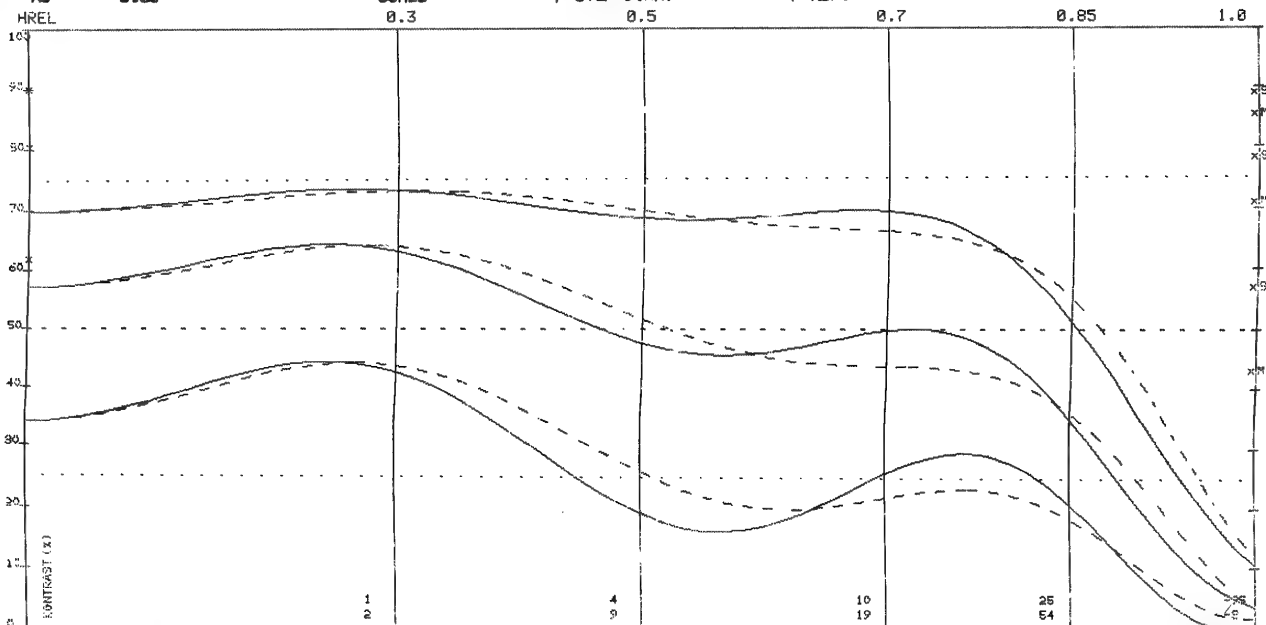


MTF (BEUG.OPT.) UEBER BILDFELD
MTF (DIFFRACT.) OVER IMAGE FIELD

AN 0
ON 7467 - 34
11.0/ 291.5

ED= -0.500 PA25(T) LAM 373.0 444.0 510.0 576.0 642.0
PERED= VLAM BEW 50.0 95.0 89.0 54.0 21.0 30.0 100.0 13.0 54.0
ORTSFREQUENZ: 10. 20. 40 1/MM
SPATIAL FREQ:
(X=BEUG.THEOR.WERT)
(X=DIFFR.LIM.VAL.)

BETA' = -0.400 BLENDENDURCHM= 21.22 BLENDENZ=1: 11.0
SCALE F-STOP DIAM. F-NUMB
0.3 0.5 0.7 0.85 1.0

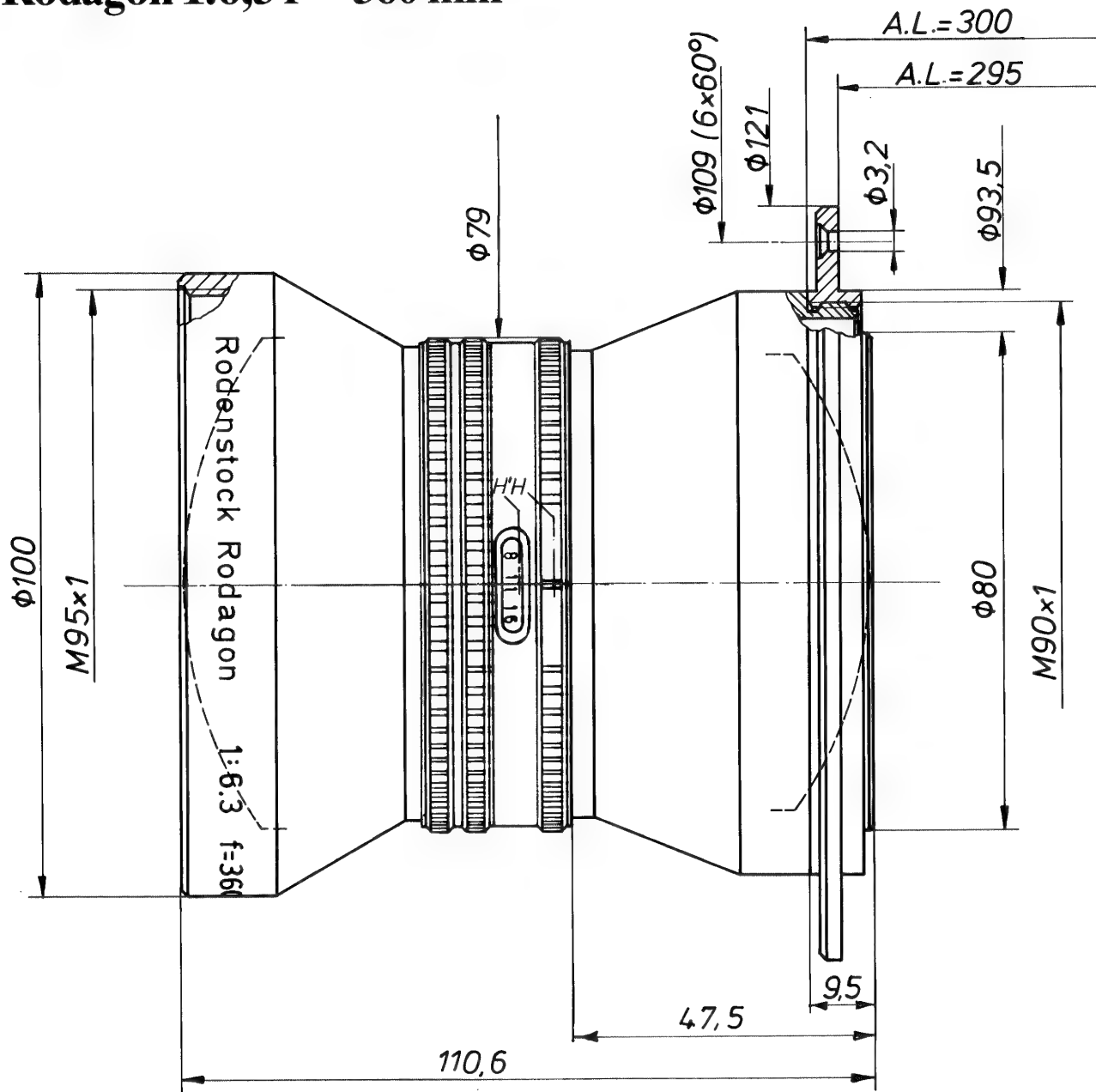


Y	Y'	WINKEL (GRAD)	HELLIGKEIT (X)	VERZ (0/00)	DATUM/DATE
-162.75	0 (MITTE)	0	96	0	24- 3-86
65.01	0 (AXIS)	0	96	0	
9.1	ANGLE (DEGR.)	0	96	0	
14.9	LIGHT-INT. (X)	0	96	0	
93	DIST (0.1X)	0	96	0	
-0.11					
-0.36					
-0.82					
-1.35					
-2.11					

OPT.WERKE G.RODENSTOCK.MUENCHEN

REPRO-HANDBUCH PROCESS LENS MANUAL

Rodagon 1:6,3 $f = 360$ mm



Bestell-Nr.	271.0360.001.000
Zeichnungsnummer	0701.282/3341.1
Optik-Nr.	7511-9001
Zubehör	2 Schutzkappen, 1 Anschraubring
optimaler	
Abbildungsmaßstab $\beta'_{\text{opt.}}$	-2,5
effektive Brennweite f'	347,3
Schnittweite s'_f	291,6
Hauptpunktstand HH'	-5,97
Bildwinkel $2w$	56°

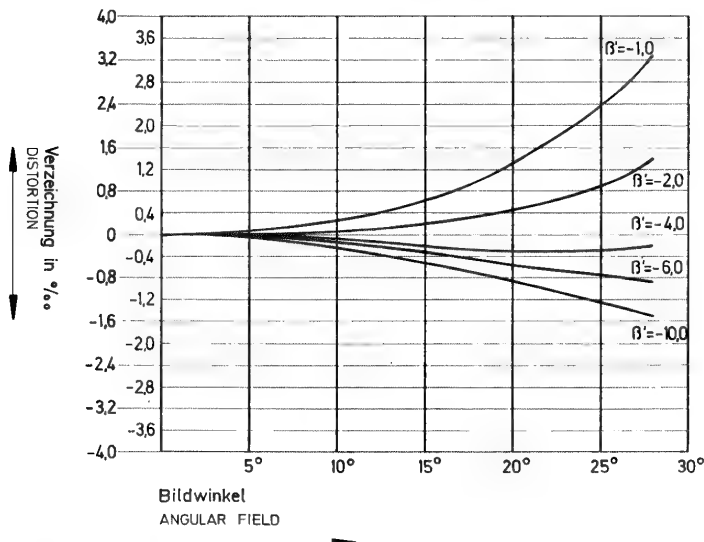
Alle nicht bezeichneten Maße sind Millimeterangaben

Order No.	271.0360.001.000
Drawing No.	0701.282/3341.1
Lens No.	7511-9001
Accessories	2 lens cap, 1 screw ring
Optimum scale $\beta'_{\text{opt.}}$	-2,5
Effective focal length f'	347,3 mm
Rear focus s'_f	291,6 mm
Separation of nodal points HH'	-5,97 mm
Angle of field $2w$	56°

All sizes not otherwise indicated are in mm

REPRO-HANDBUCH PROCESS LENS MANUAL

Rodagon 1:6,3 f = 360 mm



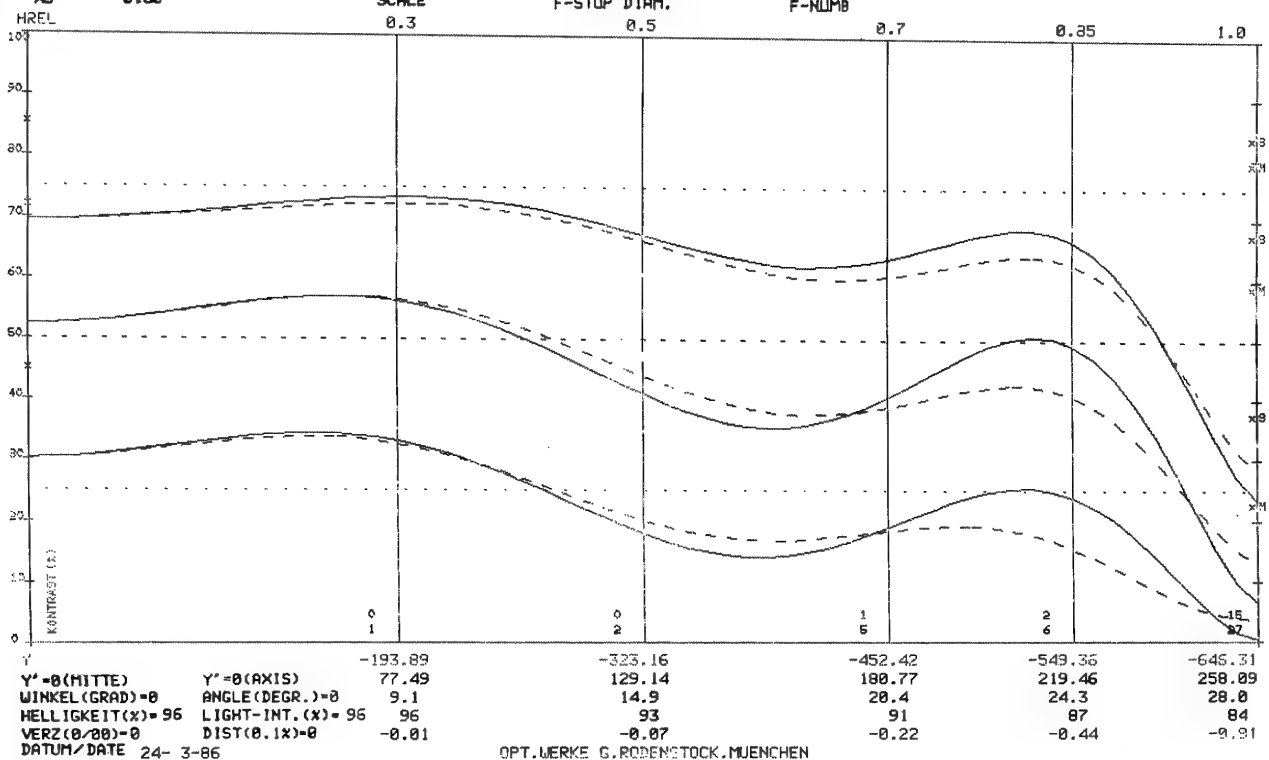
MTF (BEUG.OPT.) UEBER BILDFELD
MTF (DIFFRACT.) OVER IMAGE FIELD

ED= -0.420 PA25(T) LAM 378.0 444.0 510.0 576.0 642.0
PERED= VLAM BEU 50.0 95.0 99.0 54.3 21.0 30.0 100.0 13.0 54.0
ORTSFREQUENZ: 10, 20, 40 1/111
SPATIAL FREQ: (X=BEUG.THEOR.WERT)
(X=DIFFR.LTH.VAL.)
XS= 0.00 BETA' = -0.400 BLENDENDURCHM= 17.35 BLENDENZ=1: 16.0
SCALE F-STOP DIAM. F-NUMB

AN 678281210

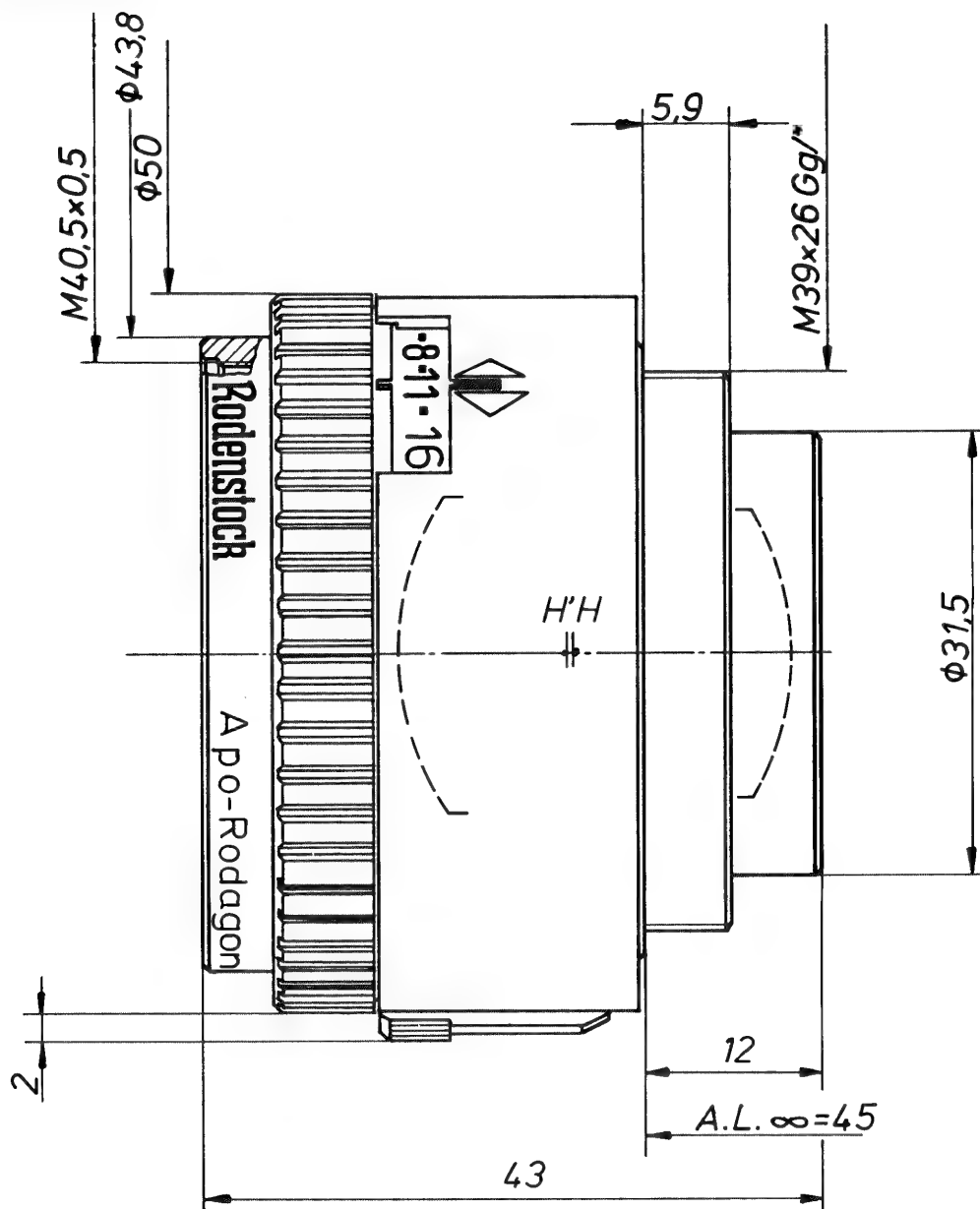
ON 7511 -9901

16.0/ 347.3



REPRO-HANDBUCH PROCESS LENS MANUAL

Apo-Rodagon 1:2,8 f = 50 mm



Bestell-Nr. 275.0050.001.000
Zeichnungsnummer 0701.278/3306.1
Optik-Nr. 7407-345
Zubehör 1 Schutzkappe,
 1 Anschraubring
optimaler
Abbildungsmaßstab β'_{opt} -10
effektive Brennweite f' 50.2
Schnittweite s'_F 34.7
Hauptpunktstand HH' -0.17
Bildwinkel $2w$ 46°

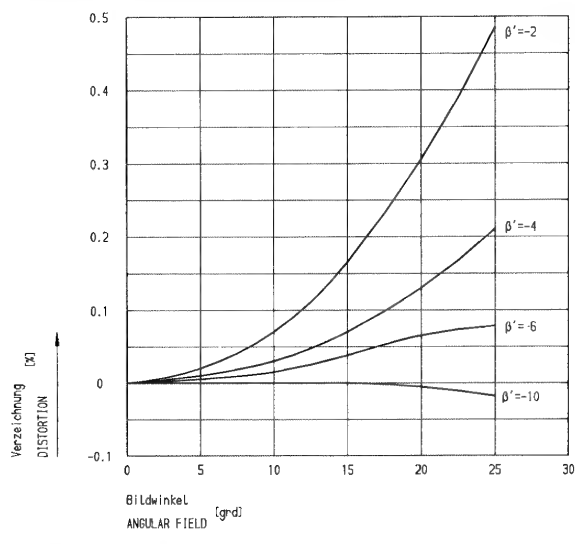
Alle nicht bezeichneten Maße sind Millimeterangaben

Order No. 275.0050.001.000
Drawing No. 0701.278/3306.1
Lens No. 7407-345
Accessories 1 lens cap
 1 screw ring
Optimum scale β'_{opt} -10
Effective focal length f' 50.2 mm
Rear focus s'_F 34.7 mm
Separation of
nodal points HH' -0.17 mm
Angle of field $2w$ 46°

All sizes not otherwise indicated are in mm

REPRO-HANDBUCH PROCESS LENS MANUAL

Apo-Rodagon 1:2,8 f = 50 mm



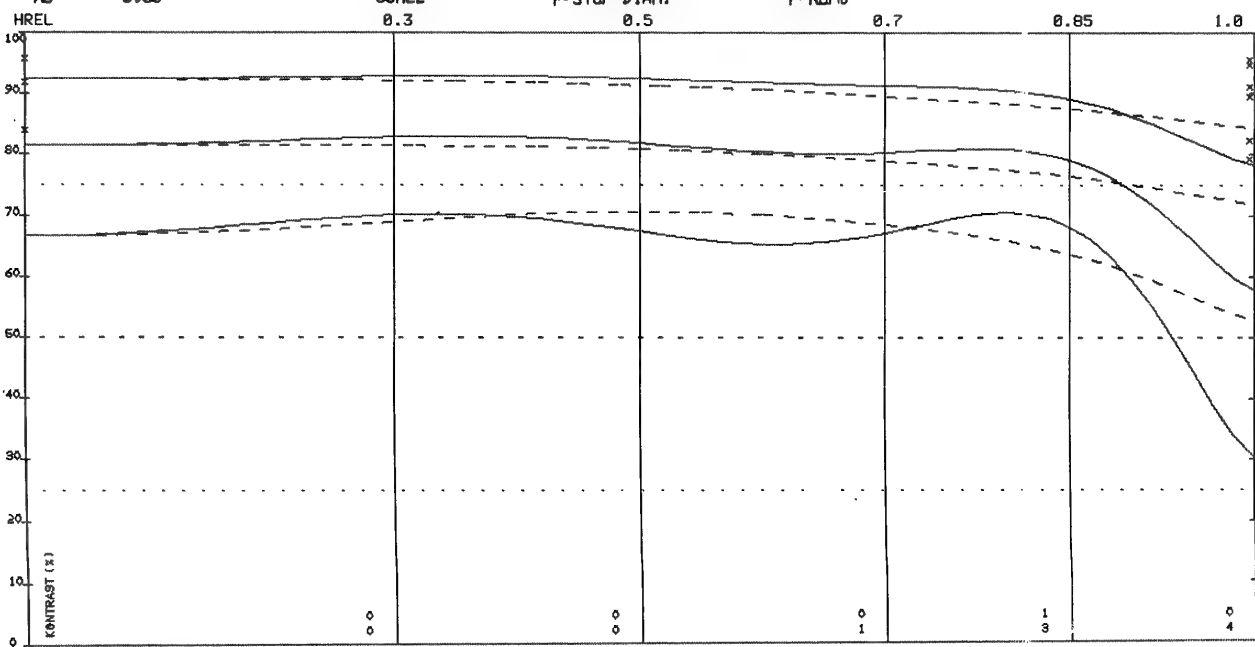
MTF (BEUG.OPT.) UEBER BILDFELD
MTF (DIFFRACT.) OVER IMAGE FIELD

AN 0

ED= -0.078 PA25(T) LAM 378.0 444.0 510.0 576.0 642.0
PERED= VLAM BEW 50.0 95.0 89.0 54.0 21.0 30.0 100.0 13.0 54.0
ORTSFREQUENZ: 10, 20, 40 1/11
SPATIAL FREQ:
(X=BEUG.THEOR.WERT)
(X=DIFFR.LIM.VAL.)
XS= 0.00 BETA' = -0.100 BLENDENDURCH= 6.17 BLENDENZ=1: 5.6
SCALE F-STOP DIAM. F-NUMB

ON 7407 - 345

5.6/ 50.2

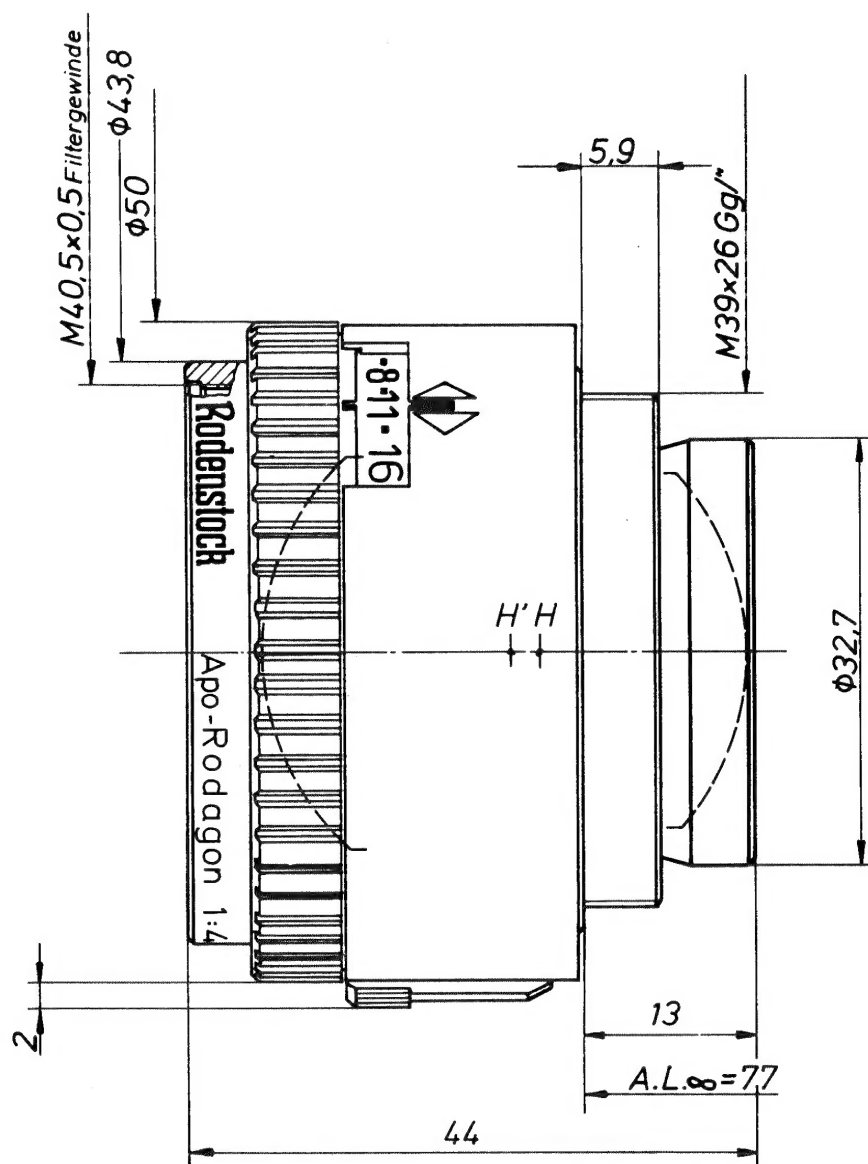


Y	Y'	-70.35	-117.25	-164.15	-199.32	-234.49
Y' = 0 (MITTE)	Y' = 0 (AXIS)	7.02	11.71	16.39	19.90	23.42
WINKEL (GRAD) = 0	ANGLE (DEGR.) = 0	7.3	12.0	16.5	19.8	23.0
HELLIGKEIT (X) = 96	LIGHT-INT. (X) = 96	95	94	92	91	89
VERZ (0/00) = 0	DIST (0.1X) = 0	-0.08	-0.12	-0.15	-0.11	0.06
DATUM/DATE 24- 3-86						

OPT.WERKE G.RODENSTOCK.MUENCHEN

REPRO-HANDBUCH PROCESS LENS MANUAL

Apo-Rodagon 1:4 f = 80 mm



Bestell-Nr.	275.0080.001.000
Zeichnungsnummer	0701.319/3511.2
Optik-Nr.	7512-9011
Zubehör	1 Behälter, 1 Schutzkappe, 1 Anschraubring, 1 Tüte
optimaler	
Abbildungsmaßstab β'_{opt}	8×
effektive Brennweite f'	82,6
Schnittweite s'_f	64,2
Hauptpunktstand HH'	2,27
Bildwinkel $2w$	56°

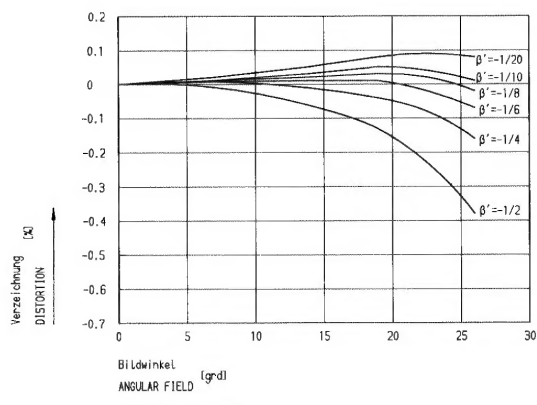
Alle nicht bezeichneten Maße sind Millimeterangaben

Order No.	275.0080.001.000
Drawing No.	0701.319/3511.2
Lens No.	7512-9011
Accessories	1 Behälter, 1 Schutzkappe, 1 Anschraubring, 1 Tüte
Optimum scale β'_{opt}	8×
Effective focal length f'	82.6
Rear focus s'_f	64.2
Separation of	
nodal points HH'	2.27
Angle of field $2w$	56°

All sizes not otherwise indicated are in mm

REPRO-HANDBUCH PROCESS LENS MANUAL

Apo-Rodagon 1:4 f = 80 mm



NTF (BEUG.OPT.) UEBER BILDFELD

AN 678291240

ED= -0.078 PA25(T) LAM 378.0 444.0 510.0 576.0 642.0
PERED= VLAM BEW 50.0 95.0 89.0 54.0 21.0 30.0 100.0 13.0 54.0

ON 7601 -9022

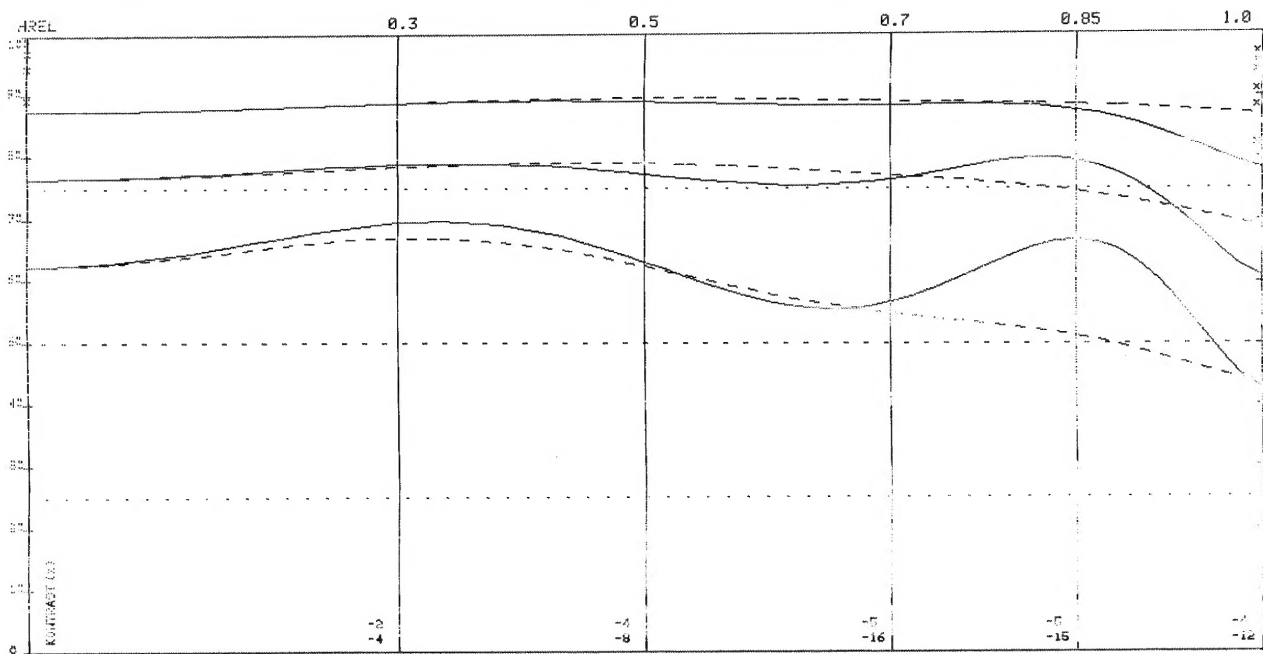
ORTSFREQUENZ: 10. 20. 40 1/MM

4.0/ 52.1

(X=BEUG.THEOR.WERT)

XS= 0.00

BETA' = -0.040 BLENDENDURCHM= 8.79 BLENDENZ=1: 4.0



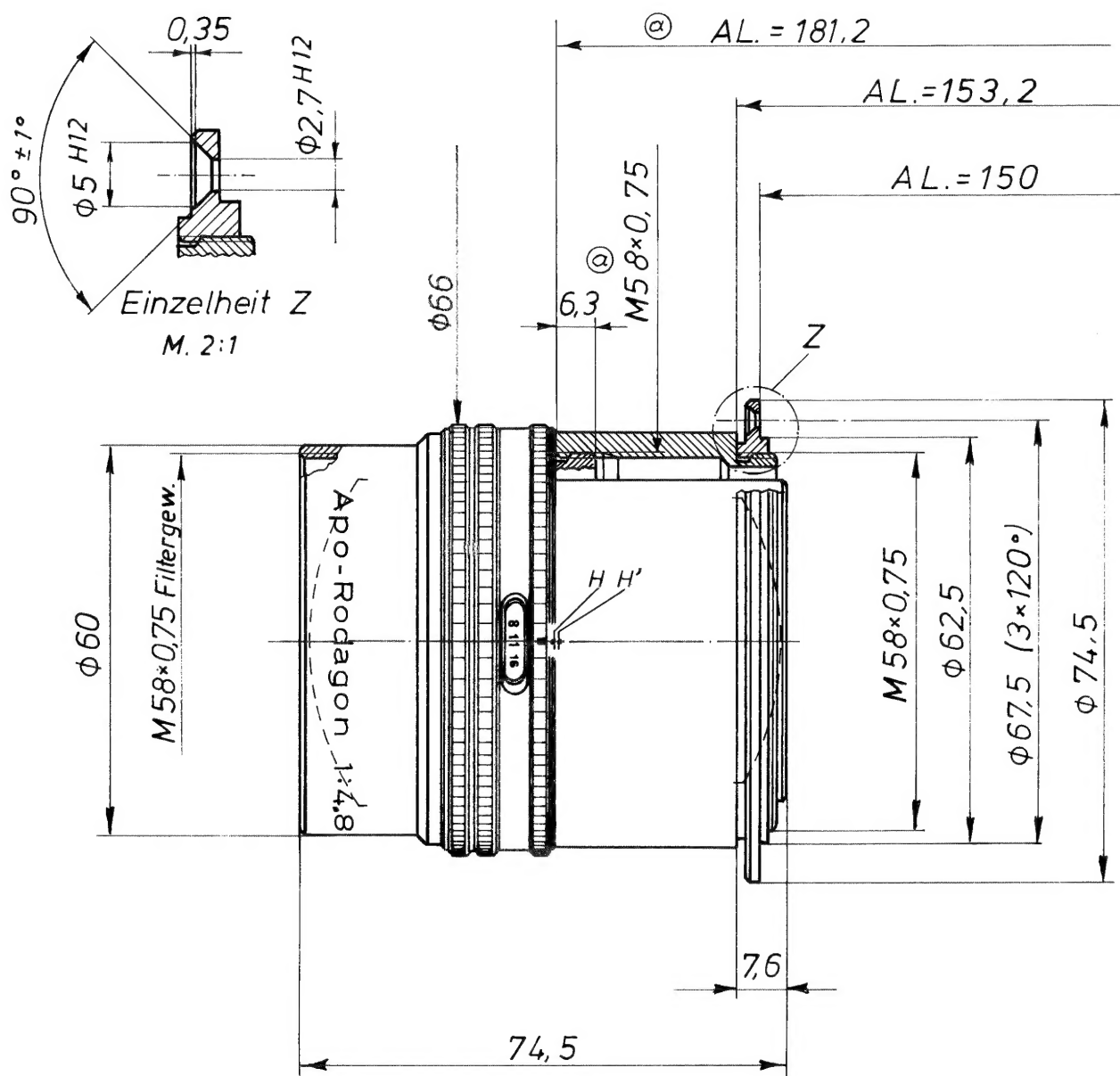
Y	-161.41	-269.02	-376.63	-457.34	-538.05
Y'=0(MITTE)	6.45	10.74	15.03	18.23	21.42
WINKEL(GRAD)	6.8	11.2	15.5	18.7	21.7
HELLIGKEIT(%)	96	96	96	96	96
VERZ(%)	-0.04	-0.41	-1.24	-1.16	-2.14

DATUM 20- 0-05

OPT.WERKE G.RODENSTOCK.MUEHNCHEN

REPRO-HANDBUCH PROCESS LENS MANUAL

Apo-Rodagon 1:4,8 f = 180 mm



Bestell-Nr. 275.0180.001.000
 Zeichnungsnummer 0701.308/3443.3
 Optik-Nr. 7505-9004
 Zubehör 2 Schutzkappen
 1 Anschraubring

optimaler
 Abbildungsmaßstab β'_{opt} -6
 effektive Brennweite f' 180,3
 Schnittweite s'_f 146,2
 Hauptpunktstand HH' 0,75
 Bildwinkel $2w$ 46°

Alle nicht bezeichneten Maße sind Millimeterangaben

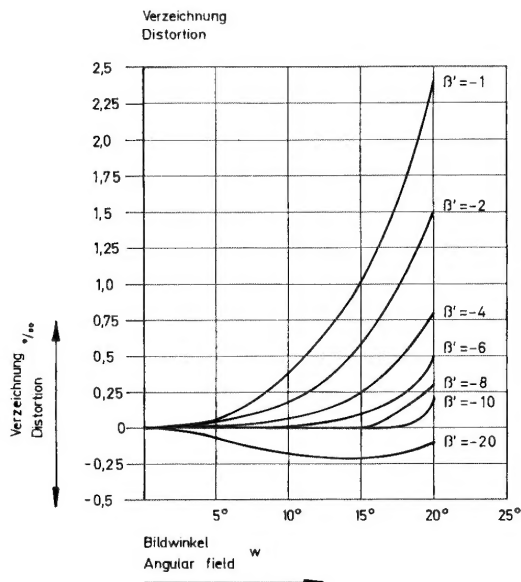
Order No. 275.0180.001.000
 Drawing No. 0701.308/3443.3
 Lens No. 7505-9004
 Accessories 2 lens cap
 1 screw ring

Optimum scale β'_{opt} -6
 Effective focal length f' 180.3 mm
 Rear focus s'_f 146.2 mm
 Separation of
 nodal points HH' 0.75 mm
 Angle of field $2w$ 46°

All sizes not otherwise indicated are in mm

REPRO-HANDBUCH PROCESS LENS MANUAL

Apo-Rodagon 1:4,8 f = 180 mm



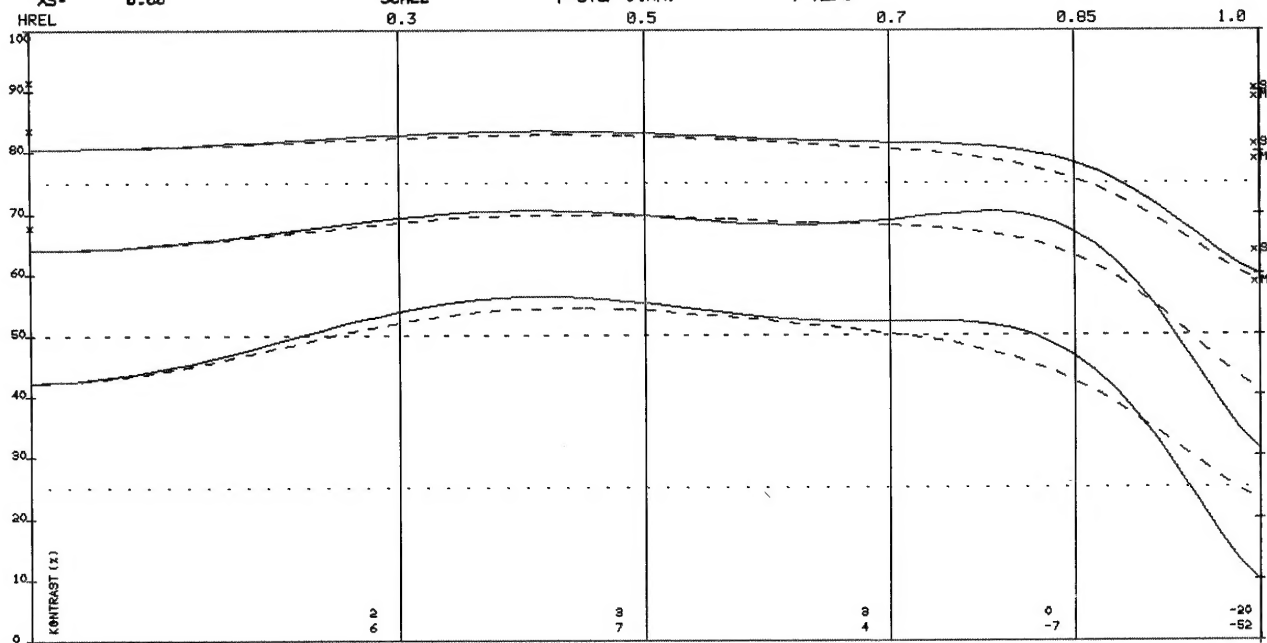
MTF (BEUG.OPT.) UEBER BILDFELD
MTF (DIFFRACT.) OVER IMAGE FIELD

AN 678281172

ON 7505 -9004

11.0/ 180.5

ED= -0.276 PA25(T) LAM 378.0 444.0 510.0 576.0 642.0
PERED= VLAM BEW 50.0 95.0 89.0 54.0 21.0 30.0 100.0 13.0 54.0
ORTSFREQUENZ: 10, 20, 40 1/MM
SPATIAL FREQ:
(X=BEUG.THEOR.WERT)
(X=DIFFR.LIM.VAL.)
XS= 0.00 BETA' = -0.166 BLENDENDURCHM= 12.72 BLENDENZ=1: 11.0
SCALE F-STOP DIAM. F-NUMB
0.3 0.5 0.7 0.85 1.0



Y' = 0 (MITTE) Y' = 0 (AXIS) -161.42 -269.03 -376.64 -457.35 -538.06
WINKEL (GRAD) = 0 ANGLE (DEGR.) = 0 26.76 44.60 62.43 75.79 89.13
HELLIGKEIT (X) = 96 LIGHT-INT. (X) = 96 7.3 12.0 16.5 19.8 23.0
VERZ (0/00) = 0 DIST (0.1X) = 0 96 94 93 93 91
DATUM/DATE 24- 3-86 -0.09 -0.12 -0.24 -0.45 -0.83
OPT.WERKE G.RODENSTOCK.MUENCHEN